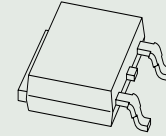


Triacs & Thyristors

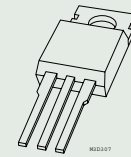
ON Semiconductor Cross Reference Guide

3-Quadrant Triacs

ON Semiconductor Part	Philips Part	$I_{T(RMS)}$ (A)	VOLTAGE (V)	$I_{GT(max)}$ (mA)	Package
MAC4DCMT4	BTA204S-600C	4	600	35/35/35	SOT428 DPAK
MAC4DCNT4	BTA204S-800C	4	800	35/35/35	SOT428 DPAK
MAC4DSMT4	BTA204S-600E	4	600	10/10/10	SOT428 DPAK
MAC4DSNT4	BTA204S-800E	4	800	10/10/10	SOT428 DPAK
MAC4M	BTA204-600C	4	600	35/35/35	SOT78 / TO220AB
MAC4N	BTA204-800C	4	800	35/35/35	SOT78 / TO220AB
MAC4SM	BTA204-600E	4	600	10/10/10	SOT78 / TO220AB
MAC4SN	BTA204-800E	4	800	10/10/10	SOT78 / TO220AB
MAC8D	BTA208-600F	8	600	25/25/25	SOT78 / TO220AB
MAC8M	BTA208-600F	8	600	25/25/25	SOT78 / TO220AB
MAC8N	BTA208-800F	8	800	25/25/25	SOT78 / TO220AB
MAC8SD	BTA208-600D	8	600	5/5/5	SOT78 / TO220AB
MAC8SM	BTA208-600D	8	600	5/5/5	SOT78 / TO220AB
MAC9D	BTA208-600B	8	600	50/50/50	SOT78 / TO220AB
MAC9M	BTA208-600B	8	600	50/50/50	SOT78 / TO220AB
MAC9N	BTA208-800B	8	800	50/50/50	SOT78 / TO220AB
MAC12D	BTA212-600F	12	600	25/25/25	SOT78 / TO220AB
MAC12HCD	BTA212-600B	12	600	50/50/50	SOT78 / TO220AB
MAC12HCM	BTA212-600B	12	600	50/50/50	SOT78 / TO220AB
MAC12HCN	BTA212-800B	12	800	50/50/50	SOT78 / TO220AB
MAC12M	BTA212-600F	12	600	25/25/25	SOT78 / TO220AB
MAC12N	BTA212-800F	12	800	25/25/25	SOT78 / TO220AB
MAC12SM	BTA212-600D	12	600	5/5/5	SOT78 / TO220AB
MAC15D	BTA216-600F	16	600	25/25/25	SOT78 / TO220AB
MAC15M	BTA216-600F	16	600	25/25/25	SOT78 / TO220AB
MAC15N	BTA216-800F	16	800	25/25/25	SOT78 / TO220AB
MAC15SD	BTA216-600D	16	600	5/5/5	SOT78 / TO220AB
MAC15SM	BTA216-600D	16	600	5/5/5	SOT78 / TO220AB
MAC16CD	BTA216-600F	16	600	25/25/25	SOT78 / TO220AB
MAC16CM	BTA216-600F	16	600	25/25/25	SOT78 / TO220AB
MAC16CN	BTA216-800F	16	800	25/25/25	SOT78 / TO220AB
MAC16D	BTA216-600B	16	600	50/50/50	SOT78 / TO220AB
MAC16HCD	BTA216-600B	16	600	50/50/50	SOT78 / TO220AB
MAC16HCM	BTA216-600B	16	600	50/50/50	SOT78 / TO220AB
MAC16HCN	BTA216-800B	16	800	50/50/50	SOT78 / TO220AB
MAC16M	BTA216-600B	16	600	50/50/50	SOT78 / TO220AB
MAC16N	BTA216-800B	16	800	50/50/50	SOT78 / TO220AB
MAC25D	BTA225-600B	25	600	50/50/50	SOT78 / TO220AB
MAC25M	BTA225-600B	25	600	50/50/50	SOT78 / TO220AB
MAC25N	BTA225-800B	25	800	50/50/50	SOT78 / TO220AB



SOT428 DPAK

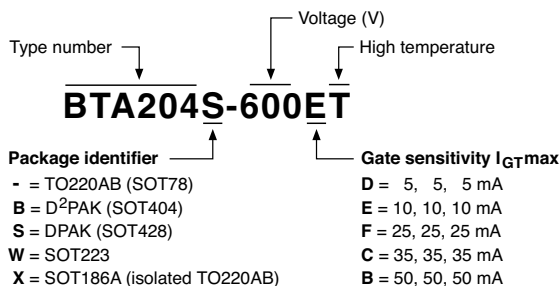


SOT78 / TO220AB

Package drawings are not to scale

3-quadrant triacs part numbering

Philips part numbering system



msd849

Triacs & Thyristors

ON Semiconductor Cross Reference Guide

4-Quadrant Triacs

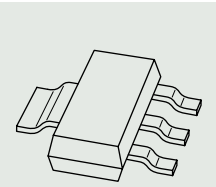
ON Semiconductor Part	Philips Part	$I_{T(RMS)}$ (A)	VOLTAGE (V)	$I_{GT(R)}$ (mA)	Package
MAC08BT1	Z0109MN	1	600	3/3/3/5	SOT223
MAC08DT1	Z0109MN	1	600	3/3/3/5	SOT223
MAC08MT1	Z0109MN	1	600	3/3/3/5	SOT223
MAC15-10	BT139-800G	16	800	50/50/50/100	SOT78 / TO220
MAC15-6	BT139-600G	16	600	50/50/50/100	SOT78 / TO220
MAC15-8	BT139-600G	16	600	50/50/50/100	SOT78 / TO220
MAC15A10	BT139-800	16	800	35/35/35/70	SOT78 / TO220
MAC15A6	BT139-600	16	600	35/35/35/70	SOT78 / TO220
MAC15A8	BT139-600	16	600	35/35/35/70	SOT78 / TO220
MAC15-10FP	BT139X-800G	16	800	50/50/50/100	SOT186A / TO220AB(Isolated)
MAC15-4FP	BT139X-600G	16	600	50/50/50/100	SOT186A / TO220AB(Isolated)
MAC15-6FP	BT139X-600G	16	600	50/50/50/100	SOT186A / TO220AB(Isolated)
MAC15-8FP	BT139X-600G	16	600	50/50/50/100	SOT186A / TO220AB(Isolated)
MAC15A10FP	BT139X-800	16	800	35/35/35/70	SOT186A / TO220AB(Isolated)
MAC15A4FP	BT139X-600	16	600	35/35/35/70	SOT186A / TO220AB(Isolated)
MAC15A6FP	BT139X-600	16	600	35/35/35/70	SOT186A / TO220AB(Isolated)
MAC15A8FP	BT139X-600	16	600	35/35/35/70	SOT186A / TO220AB(Isolated)
MAC210-10	BT138-800G	12	800	50/50/50/100	SOT78 / TO220
MAC210-4	BT138-600G	12	600	50/50/50/100	SOT78 / TO220
MAC210-6	BT138-600G	12	600	50/50/50/100	SOT78 / TO220
MAC210-8	BT138-600G	12	600	50/50/50/100	SOT78 / TO220
MAC210A10	BT138-800	12	800	35/35/35/70	SOT78 / TO220
MAC210A4	BT138-600	12	600	35/35/35/70	SOT78 / TO220
MAC210A6	BT138-600	12	600	35/35/35/70	SOT78 / TO220
MAC210A8	BT138-600	12	600	35/35/35/70	SOT78 / TO220
MAC210-10FP	BT138X-800G	12	800	50/50/50/100	SOT186A / TO220AB(Isolated)
MAC210-4FP	BT138X-600G	12	600	50/50/50/100	SOT186A / TO220AB(Isolated)
MAC210-6FP	BT138X-600G	12	600	50/50/50/100	SOT186A / TO220AB(Isolated)
MAC210-8FP	BT138X-600G	12	600	50/50/50/100	SOT186A / TO220AB(Isolated)
MAC210A10FP	BT138X-800	12	800	35/35/35/70	SOT186A / TO220AB(Isolated)
MAC210A4FP	BT138X-600	12	600	35/35/35/70	SOT186A / TO220AB(Isolated)
MAC210A6FP	BT138X-600	12	600	35/35/35/70	SOT186A / TO220AB(Isolated)
MAC210A8FP	BT138X-600	12	600	35/35/35/70	SOT186A / TO220AB(Isolated)
MAC212-10	BT138-800G	12	800	50/50/50/100	SOT78 / TO220
MAC212-4	BT138-600G	12	600	50/50/50/100	SOT78 / TO220
MAC212-6	BT138-600G	12	600	50/50/50/100	SOT78 / TO220
MAC212-8	BT138-600G	12	600	50/50/50/100	SOT78 / TO220
MAC212A10	BT138-800	12	800	35/35/35/70	SOT78 / TO220
MAC212A4	BT138-600	12	600	35/35/35/70	SOT78 / TO220
MAC212A6	BT138-600	12	600	35/35/35/70	SOT78 / TO220
MAC212A8	BT138-600	12	600	35/35/35/70	SOT78 / TO220
MAC212-10FP	BT138X-800G	12	800	50/50/50/100	SOT186A / TO220AB(Isolated)
MAC212-4FP	BT138X-600G	12	600	50/50/50/100	SOT186A / TO220AB(Isolated)
MAC212-6FP	BT138X-600G	12	600	50/50/50/100	SOT186A / TO220AB(Isolated)
MAC212-8FP	BT138X-600G	12	600	50/50/50/100	SOT186A / TO220AB(Isolated)
MAC212A10FP	BT138X-800	12	800	35/35/35/70	SOT186A / TO220AB(Isolated)
MAC212A4FP	BT138X-600	12	600	35/35/35/70	SOT186A / TO220AB(Isolated)

4-Quadrant Triacs

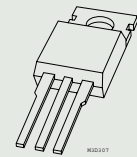
ON Semiconductor Part	Philips Part	$I_{T(RMS)}$ (A)	VOLTAGE (V)	$I_{GT(R)}$ (mA)	Package
MAC212A6FP	BT138X-600	12	600	35/35/35/70	SOT186A / TO220AB(Isolated)
MAC212A8FP	BT138X-600	12	600	35/35/35/70	SOT186A / TO220AB(Isolated)
MAC213-10	BT138-800G	12	800	50/50/50/100	SOT78 / TO220
MAC213-4	BT138-600G	12	600	50/50/50/100	SOT78 / TO220
MAC213-6	BT138-600G	12	600	50/50/50/100	SOT78 / TO220
MAC213-8	BT138-600G	12	600	50/50/50/100	SOT78 / TO220
MAC218-10	BT138-800G	12	800	50/50/50/100	SOT78 / TO220
MAC218-4	BT138-600G	12	600	50/50/50/100	SOT78 / TO220
MAC218-6	BT138-600G	12	600	50/50/50/100	SOT78 / TO220
MAC218-8	BT138-600G	12	600	50/50/50/100	SOT78 / TO220
MAC218A10	BT138-800	12	800	35/35/35/70	SOT78 / TO220
MAC218A4	BT138-600	12	600	35/35/35/70	SOT78 / TO220
MAC218A6	BT138-600	12	600	35/35/35/70	SOT78 / TO220
MAC218A8	BT138-600	12	600	35/35/35/70	SOT78 / TO220
MAC218-10FP	BT138X-800G	12	800	50/50/50/100	SOT186A / TO220AB(Isolated)
MAC218-4FP	BT138X-600G	12	600	50/50/50/100	SOT186A / TO220AB(Isolated)
MAC218-6FP	BT138X-600G	12	600	50/50/50/100	SOT186A / TO220AB(Isolated)
MAC218-8FP	BT138X-600G	12	600	50/50/50/100	SOT186A / TO220AB(Isolated)
MAC218A10FP	BT138X-800	12	800	35/35/35/70	SOT186A / TO220AB(Isolated)
MAC218A4FP	BT138X-600	12	600	35/35/35/70	SOT186A / TO220AB(Isolated)
MAC218A6FP	BT138X-600	12	600	35/35/35/70	SOT186A / TO220AB(Isolated)
MAC218A8FP	BT138X-600	12	600	35/35/35/70	SOT186A / TO220AB(Isolated)
MAC219-10	BT138X-800G	12	800	50/50/50/100	SOT186A / TO220AB(Isolated)
MAC219-4	BT138X-600G	12	600	50/50/50/100	SOT186A / TO220AB(Isolated)
MAC219-6	BT138X-600G	12	600	50/50/50/100	SOT186A / TO220AB(Isolated)
MAC219-8	BT138X-600G	12	600	50/50/50/100	SOT186A / TO220AB(Isolated)
MAC223A10	BTA140-800	25	800	35/35/35/70	SOT78 / TO220
MAC223A6	MAC223A6	25	400	50/50/50/75	SOT78 / TO220
MAC223A8	BTA140-600	25	600	35/35/35/70	SOT78 / TO220
MAC223A6FP	MAC223A8X	20	600	50/50/50/75	SOT186A / TO220AB(Isolated)
MAC223A8FP	MAC223A8X	20	600	50/50/50/75	SOT186A / TO220AB(Isolated)
MAC228-4	BT137-600D	8	600	5/5/5/10	SOT78 / TO220
MAC228-6	BT137-600D	8	600	5/5/5/10	SOT78 / TO220
MAC228-8	BT137-600D	8	600	5/5/5/10	SOT78 / TO220
MAC228A4	BT137-600D	8	600	5/5/5/10	SOT78 / TO220
MAC228A6	BT137-600D	8	600	5/5/5/10	SOT78 / TO220
MAC228A8	BT137-600D	8	600	5/5/5/10	SOT78 / TO220
MAC228-4FP	BT137X-600D	8	600	5/5/5/10	SOT186A / TO220AB(Isolated)
MAC228-6FP	BT137X-600D	8	600	5/5/5/10	SOT186A / TO220AB(Isolated)
MAC228-8FP	BT137X-600D	8	600	5/5/5/10	SOT186A / TO220AB(Isolated)
MAC228A4FP	BT137X-600D	8	600	5/5/5/10	SOT186A / TO220AB(Isolated)
MAC228A6FP	BT137X-600D	8	600	5/5/5/10	SOT186A / TO220AB(Isolated)
MAC228A8FP	BT137X-600D	8	600	5/5/5/10	SOT186A / TO220AB(Isolated)
MAC229-10	BT137-800E	8	800	10/10/10/25	SOT78 / TO220
MAC229-4	BT137-600E	8	600	10/10/10/25	SOT78 / TO220
MAC229-6	BT137-600E	8	600	10/10/10/25	SOT78 / TO220
MAC229-8	BT137-600E	8	600	10/10/10/25	SOT78 / TO220

4-Quadrant Triacs

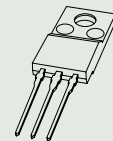
ON Semiconductor Part	Philips Part	$I_{T(RMS)}$ (A)	VOLTAGE (V)	$I_{GT(R)}$ (mA)	Package
MAC229A10	BT137-800E	8	800	10/10/10/25	SOT78 / TO220
MAC229A4	BT137-600E	8	600	10/10/10/25	SOT78 / TO220
MAC229A6	BT137-600E	8	600	10/10/10/25	SOT78 / TO220
MAC229A8	BT137-600E	8	600	10/10/10/25	SOT78 / TO220
MAC229-10FP	BT137X-800E	8	800	10/10/10/25	SOT186A / TO220AB(Isolated)
MAC229-4FP	BT137X-600E	8	600	10/10/10/25	SOT186A / TO220AB(Isolated)
MAC229-6FP	BT137X-600E	8	600	10/10/10/25	SOT186A / TO220AB(Isolated)
MAC229-8FP	BT137X-600E	8	600	10/10/10/25	SOT186A / TO220AB(Isolated)
MAC229A10FP	BT137X-800E	8	800	10/10/10/25	SOT186A / TO220AB(Isolated)
MAC229A4FP	BT137X-600E	8	600	10/10/10/25	SOT186A / TO220AB(Isolated)
MAC229A6FP	BT137X-600E	8	600	10/10/10/25	SOT186A / TO220AB(Isolated)
MAC229A8FP	BT137X-600E	8	600	10/10/10/25	SOT186A / TO220AB(Isolated)
MAC320A10	BTA140-800	25	800	35/35/35/70	SOT78 / TO220
MAC320A4	BTA140-600	25	600	35/35/35/70	SOT78 / TO220
MAC320A6	BTA140-600	25	600	35/35/35/70	SOT78 / TO220
MAC320A8	BTA140-600	25	600	35/35/35/70	SOT78 / TO220
MAC4DHMT4	BT136S-600D	4	600	5/5/5/10	SOT428 DPAK
MAC97-8	BT131-600E / Z0109MA	1	600	10/10/10/10	SOT54 / TO92
MAC97A4	BT1306-400D / MAC97A6	0.6	400	5/5/5/7	SOT54 / TO92
MAC97A6	BT1306-400D / MAC97A6	0.6	400	5/5/5/7	SOT54 / TO92
MAC97A8	BT1306-600D / MAC97A8	0.6	600	5/5/5/7	SOT54 / TO92
MAC997A6	BT131-600D / Z0107MA	1	600	5/5/5/7	SOT54 / TO92
MAC997A8	BT131-600D / Z0107MA	1	600	5/5/5/7	SOT54 / TO92
MAC997B6	BT131-600 / Z0103MA	1	600	3/3/3/7	SOT54 / TO92
MAC997B8	BT131-600 / Z0103MA	1	600	3/3/3/7	SOT54 / TO92
T2322B	BT134-600D	4	600	5/5/5/10	SOT82
T2500B	BT137-600F	8	600	25/25/25/70	SOT78 / TO220
T2500D	BT137-600F	8	600	25/25/25/70	SOT78 / TO220
T2500M	BT137-600F	8	600	25/25/25/70	SOT78 / TO220
T2500N	BT137-800F	8	800	25/25/25/70	SOT78 / TO220
T2500BFP	BT137X-600F	8	600	25/25/25/70	SOT186A / TO220AB(Isolated)
T2500DFP	BT137X-600F	8	600	25/25/25/70	SOT186A / TO220AB(Isolated)
T2500MFP	BT137X-600F	8	600	25/25/25/70	SOT186A / TO220AB(Isolated)
T2500NFP	BT137X-800F	8	800	25/25/25/70	SOT186A / TO220AB(Isolated)
T2800B	BT138-600F	12	600	25/25/25/70	SOT78 / TO220
T2800D	BT138-600F	12	600	25/25/25/70	SOT78 / TO220
T2800M	BT138-600F	12	600	25/25/25/70	SOT78 / TO220



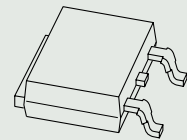
SOT223



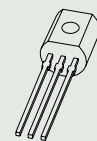
SOT78 / TO220



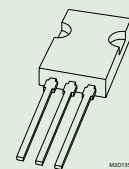
SOT186A / TO220AB (Isolated)



SOT428 DPAK



SOT54 / TO92

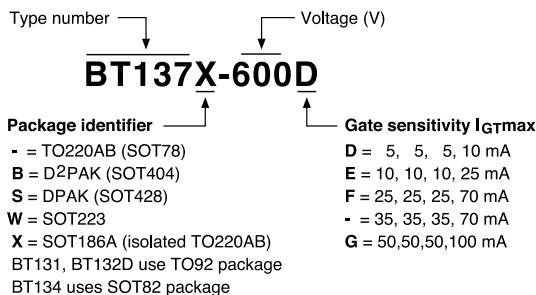


SOT82

Package drawings are not to scale

4-quadrant triacs part numbering

Philips part numbering system



msd850

Thyristor (SCR)

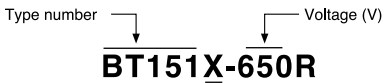
ON Semiconductor Part	Philips Part	$I_{T(RMS)}$ (A)	VOLTAGE (V)	$I_{GT(X)}$ (μ A)	Package
C106B	BT148-400R	4	400	200	SOT82
C106D	BT148-400R	4	400	200	SOT82
C106D1	BT148-400R	4	400	200	SOT82
C106M	BT148-600R	4	600	200	SOT82
C106M1	BT148-600R	4	600	200	SOT82
C122B1	BT151-500C	12	500	15	SOT78 / TO220AB
MCR08BT1	MCR08BT1	0,8	200	200	SOT223
MCR08DT1	BT168DW	0,8	400	200	SOT223
MCR08MT1	BT168GV	0,8	600	200	SOT223
MCR100-3	BT169B	0,8	200	200	SOT54 / TO92
MCR100-4	BT169B	0,8	200	200	SOT54 / TO92
MCR100-6	BT169D	0,8	400	200	SOT54 / TO92
MCR100-8	BT169G	0,8	600	200	SOT54 / TO92
MCR106-2	BT148-400R	4	400	200	SOT82
MCR106-3	BT148-400R	4	400	200	SOT82
MCR106-4	BT148-400R	4	400	200	SOT82
MCR106-6	BT148-400R	4	400	200	SOT82
MCR106-8	BT148-600R	4	600	200	SOT82
MCR12D	BT151-500C	12	500	15	SOT78 / TO220AB
MCR12DCMT4	BT151S-650R	12	650	15	SOT428 DPAK
MCR12DCNT4	BT151S-800R	12	800	15	SOT428 DPAK
MCR12LD	BT151-500C	12	500	15	SOT78 / TO220AB
MCR12LM	BT151-650C	12	650	15	SOT78 / TO220AB
MCR12LN	BT151-800C	12	800	15	SOT78 / TO220AB
MCR12M	BT151-650C	12	650	15	SOT78 / TO220AB
MCR12N	BT151-800C	12	800	15	SOT78 / TO220AB
MCR16D	BT152-400R	20	400	32	SOT78 / TO220AB
MCR16M	BT152-600R	20	600	32	SOT78 / TO220AB
MCR16N	BT152-800R	20	800	32	SOT78 / TO220AB
MCR218-10	BT151-800C	12	800	15	SOT78 / TO220AB
MCR218-10FP	BT151X-800C	12	800	15	SOT186A / TO220AB(Isolated)
MCR218-2	BT151-500C	12	500	15	SOT78 / TO220AB
MCR218-4	BT151-500C	12	500	15	SOT78 / TO220AB
MCR218-6	BT151-500C	12	500	15	SOT78 / TO220AB
MCR218-6FP	BT151X-500C	12	500	15	SOT186A / TO220AB(Isolated)
MCR25D	BT145-500R	25	500	35	SOT78 / TO220AB
MCR25M	BT145-600R	25	600	35	SOT78 / TO220AB
MCR25N	BT145-800R	25	800	35	SOT78 / TO220AB
MCR68-2	BT151-500C	12	500	15	SOT78 / TO220AB
MCR69-2	BT145-500R	25	500	35	SOT78 / TO220AB

ON Semiconductor Part	Philips Part	$I_{T(RMS)}$ (A)	VOLTAGE (V)	$I_{GT(x)}$ (μ A)	Package
MCR69-3	BT145-500R	25	500	35	SOT78 / TO220AB
MCR716T4	BT150S-500R	4	500	200	SOT428 DPAK
MCR718T4	BT150S-600R	4	600	200	SOT428 DPAK
MCR8D	BT151-500C	12	500	15	SOT78 / TO220AB
MCR8DCMT4	BT300S-600R	8	600	15	SOT428 DPAK
MCR8DCNT4	BT300S-800R	8	800	15	SOT428 DPAK
MCR8DSMT4	BT258S-600R	8	600	200	SOT428 DPAK
MCR8DSNT4	BT258S-800R	8	800	200	SOT428 DPAK
MCR8M	BT151-650C	12	650	15	SOT78 / TO220AB
MCR8N	BT151-800C	12	800	15	SOT78 / TO220AB
MCR8SD	BT258-500R	8	500	200	SOT78 / TO220AB
MCR8SM	BT258-600R	8	600	200	SOT78 / TO220AB
MCR8SN	BT258-800R	8	800	200	SOT78 / TO220AB

Thyristors part numbering

SCRs

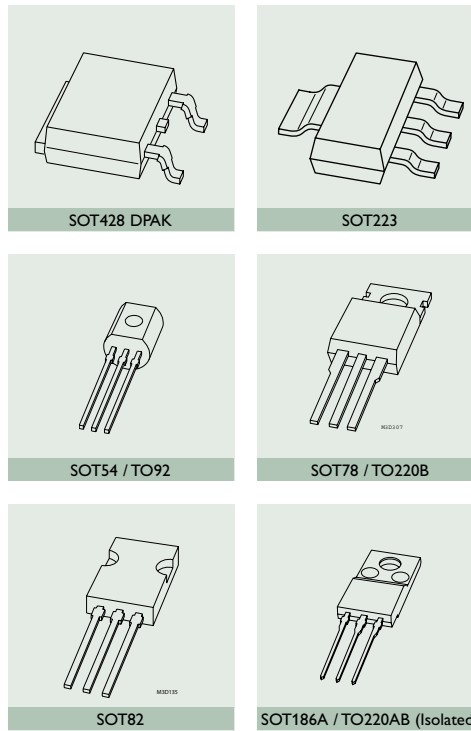
Philips part numbering system



Package identifier

- = TO220AB (SOT78)
- B = D²PAK (SOT404)
- S = DPAK (SOT428)
- U = IPAK (SOT533/TO251)
- W = SOT223
- X = SOT186A (isolated TO220AB)
- BT149, BT168 & BT169 use TO92 package
- BT148 uses SOT82 package

MSD848



Package drawings are not to scale

Philips Semiconductors

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SCS 79

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