



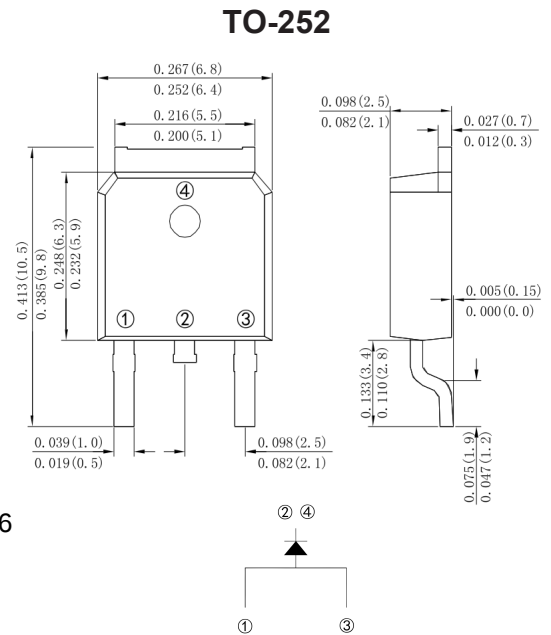
10A 300V Schottky Barrier Diode

Features

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- Construction utilizes void-free molded plastic technique
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed
260 /10 seconds at terminals

Mechanical Data

- Case : Molded plastic body
- Terminals : Solder plated, solderable per MIL-STD-750,Method 2026
- Polarity : Polarity symbol marking on body
- Mounting Position : Any



Dimensions in inches and (millimeters)

Maximum Ratings ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbols	MBR10300YS	Units
Maximum repetitive peak reverse voltage	V_{RRM}	300	V
Maximum RMS voltage	V_{RMS}	210	V
Maximum DC blocking voltage	V_{DC}	300	V
Maximum average forward rectified current at $T_c=110^{\circ}\text{C}$	$I_{(AV)}$	10.0	A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	150.0	A
Typical thermal resistance	R_{qJC}	4.5	$^{\circ}\text{C/W}$
Operating junction temperature range	T_J	-55 to +150	$^{\circ}\text{C}$
Storage temperature range	T_{STG}	-55 to +150	$^{\circ}\text{C}$

Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Parameter		Symbols	Type	MAX	Units
Maximum instantaneous forward voltage	at 5.0A at 10.0A	V_F	0.83 0.93	0.88 0.98	V
Maximum DC reverse current at rated DC blocking voltage	$T_A=25^{\circ}\text{C}$ $T_A=100^{\circ}\text{C}$	I_R	0.5 1	50 10	μA mA



Ratings and Characteristic Curves

FIG. 1- DERATING CURVE OUTPUT RECTIFIED CURRENT

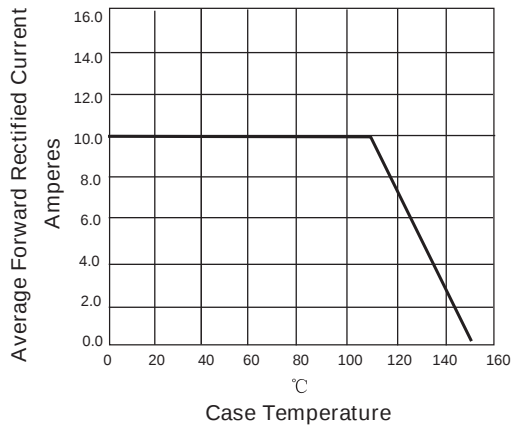


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

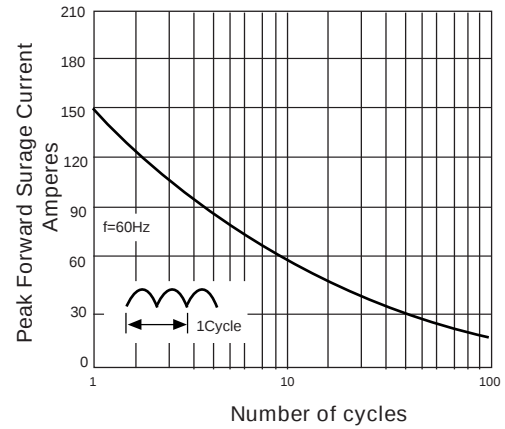


FIG. 3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

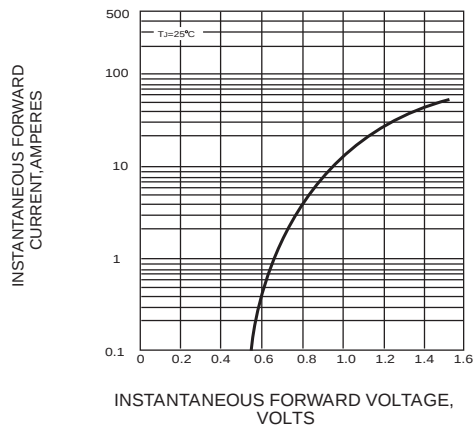
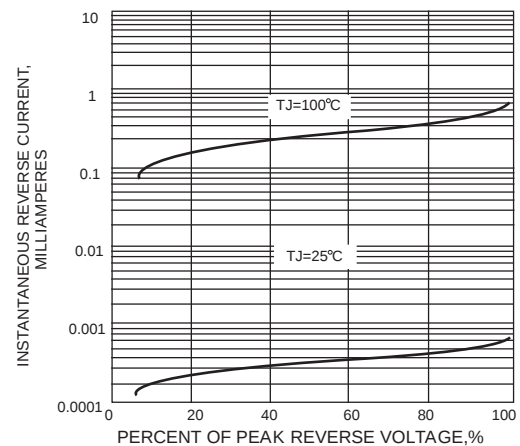
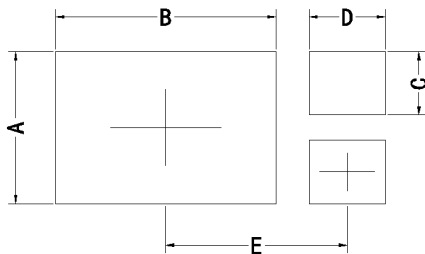


FIG. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS



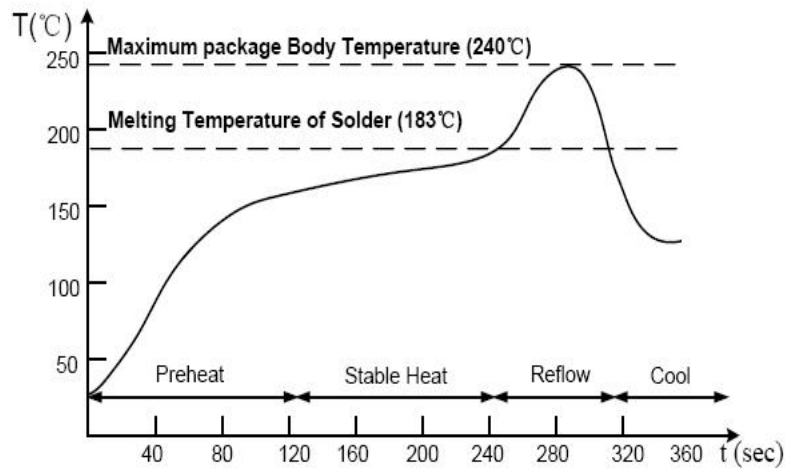
Suggested Pad Layout



Symbol	Unit (mm)	Unit (inch)
A	6.10	0.240
B	7.57	0.298
C	1.42	0.056
D	2.76	0.109
E	6.64	0.261



Suggested Soldering Temperature Profile

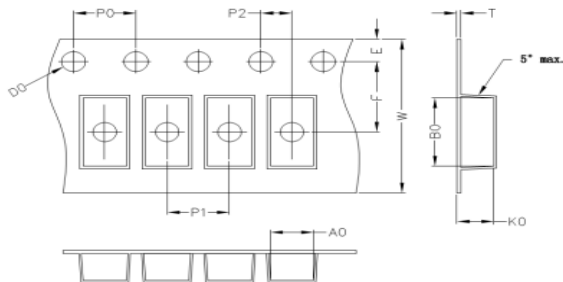


Note

- Recommended reflow methods: IR, vapor phase oven, hot air oven, wave solder.
- The device can be exposed to a maximum temperature of 260°C for 10 seconds.
- Devices can be cleaned using standard industry methods and solvents.
- If reflow temperatures exceed the recommended profile, devices may not meet the performance requirements.

Package Information

Carrier Dimension(mm)



A0	B0	K0	D0	E	F
6.90	10.5	2.70	1.55	1.75	7.50
P0	P1	P2	T	W	Tolerance
4.0	8.0	2.0	0.30	16	0.1

Package Specifications

Package	Reel Size	Reel DIA. (mm)	Q'TY/Reel (Kpcs)	Box Size (mm)	QTY/Box (Kpcs)	Carton Size (mm)	Q'TY/Carton (Kpcs)
TO-252	13'	330	2.5	340	5.0	360*360*360	40