



SBR(X)1045CT

Trench Schottky Barrier Rectifier
Reverse Voltage 45 Volts Forward Current 10 Amperes

Features

Ultra Low $V_F=0.34V$ at $I_F=1A$ (25°C)

Ultra Low $V_F=0.47V$ at $I_F=5A$ (25°C)

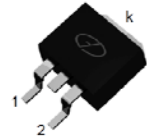
- Low forward voltage drop, low power losses
- High efficiency operation
- Plastic package has underwriters Laboratory Flammability Classification 94V-0



Package: ITO-220-AB
SBRF1045CT



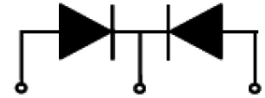
Package: TO-220-AB
SBR1045CT



Package: TO-263
SBRB1045CT

Mechanical Data

- Case: Epoxy, Molded
- Weight: 1.9grams(TO220/ITO220),1.40grams(TO263) (approximately)
- Finish: All External Surfaces Corrosion Resistant and Terminal Leads are Readily Solderable
- Lead Temperature for Soldering Purposes: 260°C Max. for 10 sec
- Shipped 50 units per plastic tube or tape reel packing 800/reel(TO263)



1. Anode 2. Cathode 3. Anode

Maximum Ratings & Electrical Characteristics

($T_A=25^\circ C$ unless otherwise noted)

PARAMETER	TEST CONDITIONS		SYMBOL	SBR(X)1045CT	UNIT
Maximum repetitive peak reverse voltage			V_{RRM}	45	V
Working peak reverse voltage			V_{RWM}	45	V
Maximum DC blocking voltage			V_{DC}	45	V
Maximum average forward rectified current at $T_c=105^\circ C$ total device/ per diode			$I_F(AV)$	10 5	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load per diode			I_{FSM}	120	A
Peak repetitive reverse current per leg at $t_p=2.0\mu s$, 1KHz			I_{RRM}	1.0	A
Voltage rate of change (rated V_R)			DV/dt	10000	V/ μs
Operating junction temperature range			T_J	-55 to +150	$^\circ C$
Storage temperature range			T_{STG}	-55 to +150	$^\circ C$
Isolation voltage (ITO-220-AB only) from terminal to heatsink $t = 1$ sec			V_{AC}	1500	V
Maximum instantaneous forward voltage per leg	$I_F=5A$ $I_F=5A$	$T_C=25^\circ C$ $T_C=125^\circ C$	V_F	0.52(0.47TYP) 0.46	V
Maximum reverse current per leg at working peak Reverse voltage			I_R	200 15	μA mA

Thermal Characteristics $T_A=25^\circ C$ unless otherwise noted

Symbol	Parameter	TYP (TO-220-AB/TO263)	TYP (ITO-220-AB)	Unit
R θ JC	Thermal Resistance, Junction to Case per Leg	2.0	4.0	$^\circ C / W$
R θ JA	Thermal Resistance, Junction to Ambient per Leg	62.5	62.5	$^\circ C / W$

Note: Pulse test:300us pulse width, duty cycle=2%



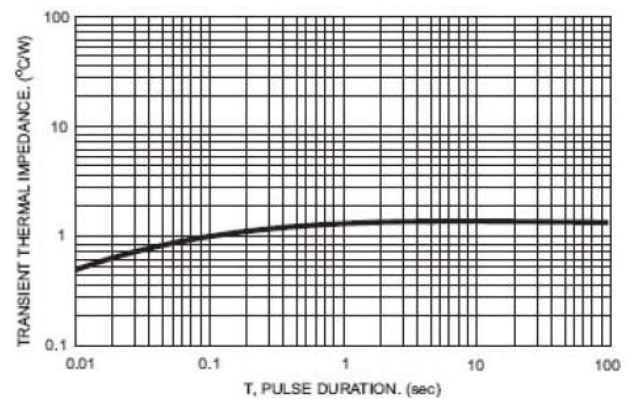
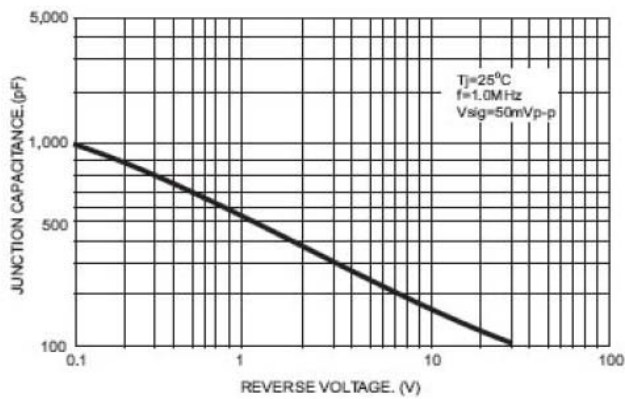
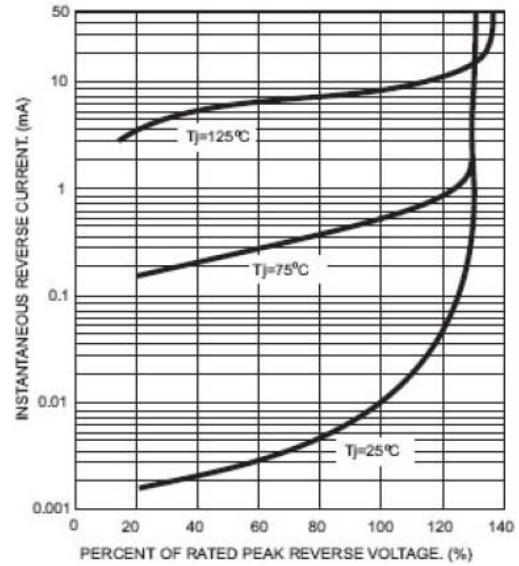
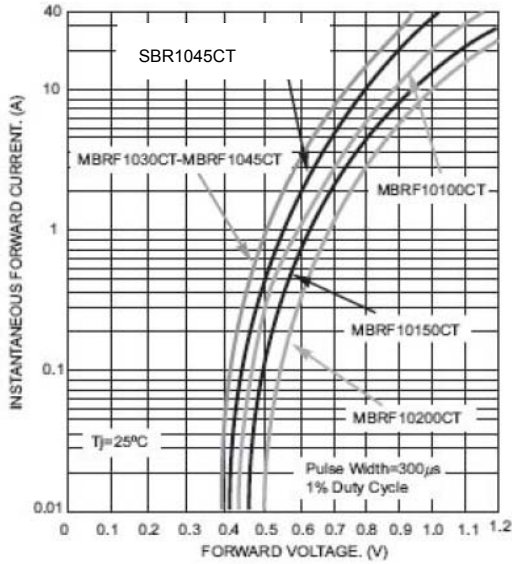
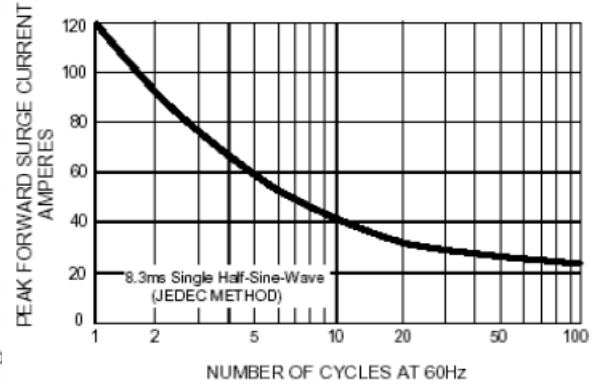
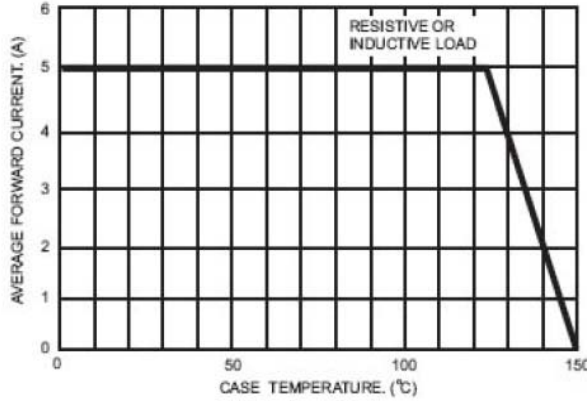


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Ratings and Characteristics Curves

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





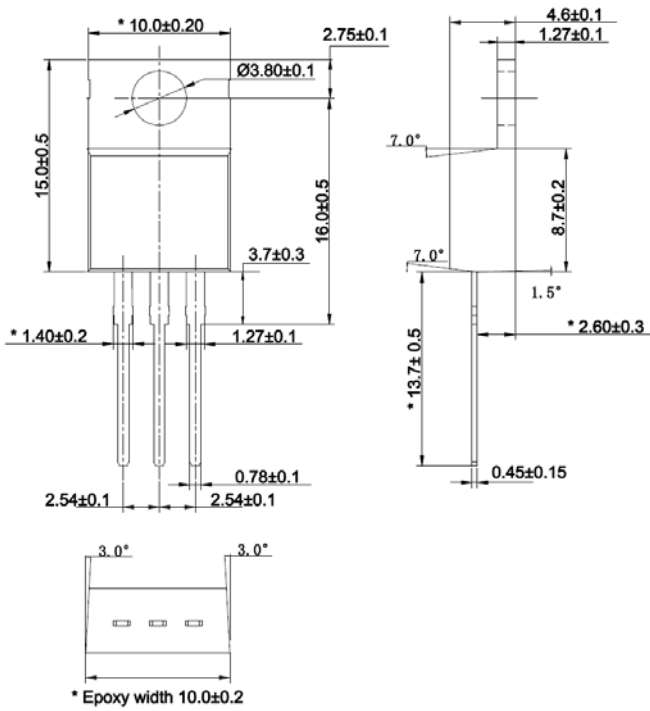
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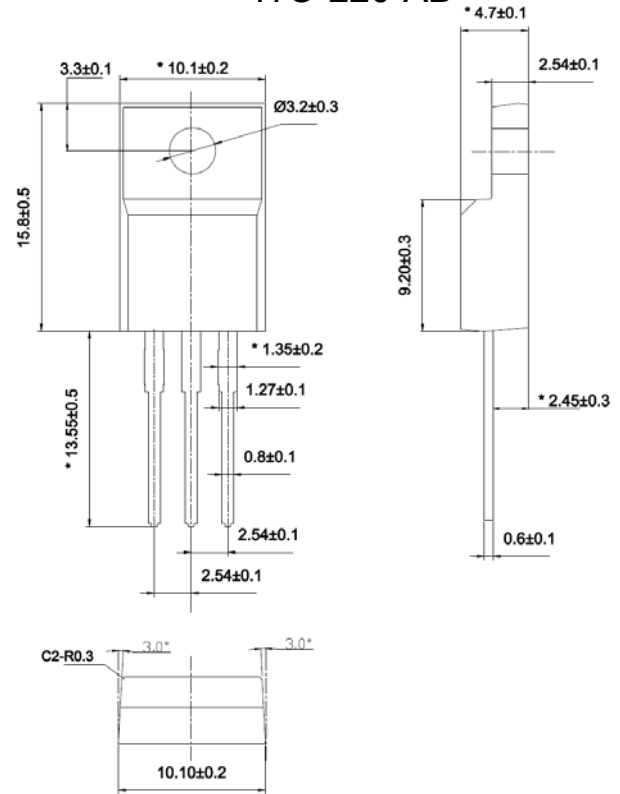
Package Outline Dimensions

Unit: millimeters

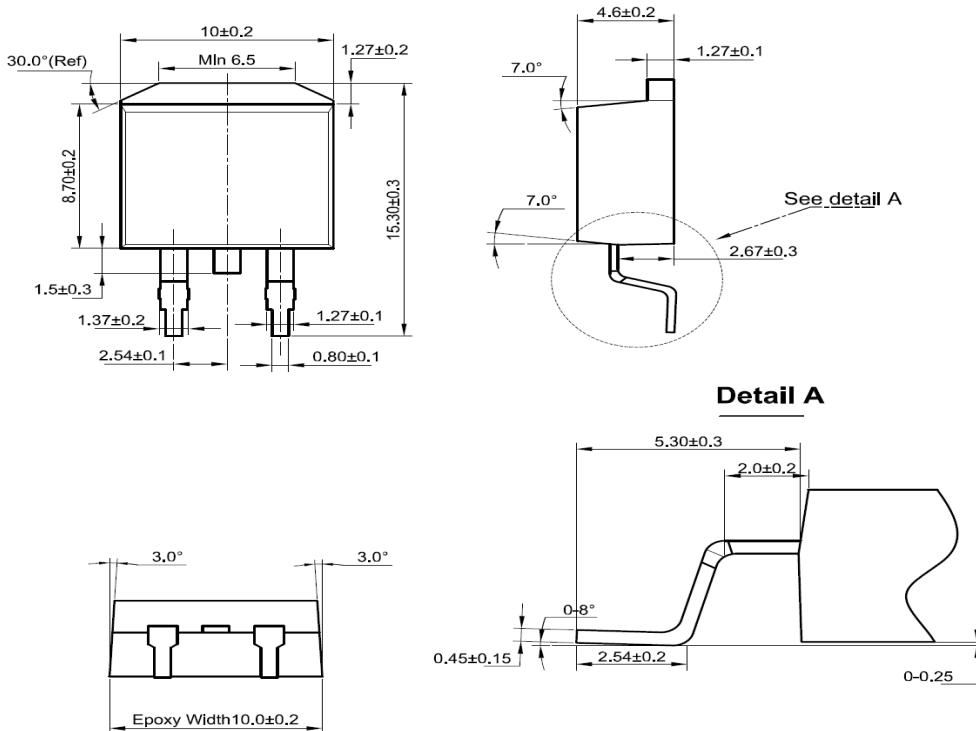
TO-220-AB



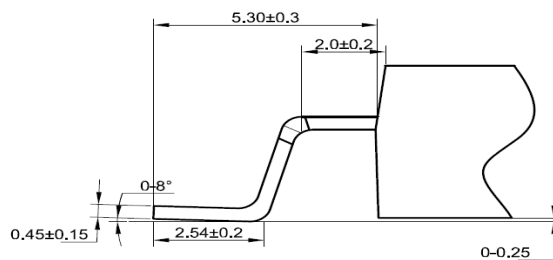
ITO-220-AB



TO-263



Detail A





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