

SBRx40100CT

Trench Schottky Barrier Rectifier
Reverse Voltage 100 V Forward Current 40 A

Features

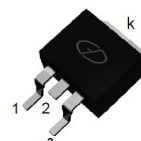
- Low forward voltage drop, low power loss
- High efficiency operation
- Plastic package has underwriters Laboratory
Flammability Classification 94V-0



Package: ITO-220-AB
SBRF40100CT



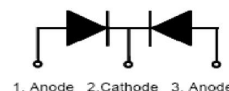
TO-220-AB
SBR40100CT



TO-263
SBRB40100CT

Mechanical Data

- Case: Epoxy, Molded
- Weight: 1.9grams(TO220/ITO220), 1.4grams(TO263) (approximately)
- All external surfaces corrosion resistant and terminal leads are readily solderable
- Lead temperature for soldering purposes: 260°C Max. for 10 sec.
- Shipped by 50 units per plastic tube or tape reel packing 800/reel(TO263)



Maximum Ratings and Electrical Characteristics

(T_A = 25°C unless otherwise noted)

Parameter	Test Conditions		Symbol	Value	Unit	
Maximum Repetitive Peak Reverse Voltage			V _{RRM}	100	V	
Working Peak Reverse Voltage			V _{RWM}	100	V	
Maximum DC Blocking Voltage			V _{DC}	100	V	
Maximum Average Forward Rectified Current	Total Device		I _{F(AV)}	40	A	
@ T _c =105°C total device per diode	Per Diode			20		
Peak Forward Surge Current (8.3ms single half sine-wave superimposed on rated load per diode)			I _{FSM}	200	A	
Peak Repetitive Reverse Current Per Leg @ t _p =2.0μs ,1KHz			I _{RRM}	2.0	A	
Voltage Rate of Change(rated V _R)			DV/dt	10000	V/us	
Operating Junction Temperature Range			T _J	-55 to +150	°C	
Storage Temperature Range			T _{STG}	-55 to +150	°C	
Isolation Voltage (ITO-220-AB only) From Terminal to Heatsink t = 1 sec			V _{AC}	1500	V	
Typical Instantaneous Forward Voltage Per Leg	I _F =10A		V _F	0.51	V	
	I _F =20A			0.62		
Maximum Instantaneous Forward Voltage Per Leg	I _F =20A	T _C =25°C		0.66		
	I _F =20A	T _C =125°C		0.59		
Maximum Reverse Current Per Leg		T _J =25°C	I _R	200	μA	
@Working Peak Reverse Voltage		T _J =100°C		15	mA	
Thermal Characteristics						
Symbol	Parameter		Typ(TO-220-AB/TO263)		Typ(ITO-220-AB)	Unit
R _{θJC}	Thermal Resistance, Junction to Case per Leg		2.0		4.0	°C /W
R _{θJA}	Thermal Resistance, Junction to Ambient per Leg		62.5		62.5	°C /W

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

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

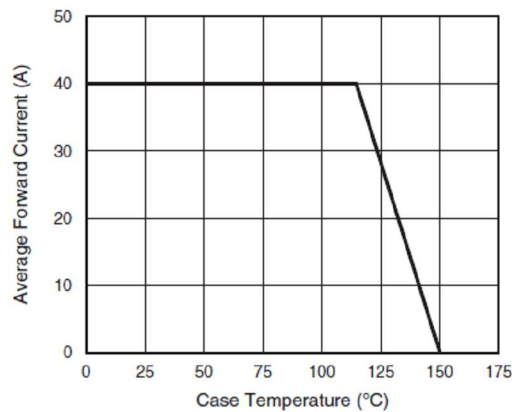


Fig. 1 - Forward Current Derating Curve

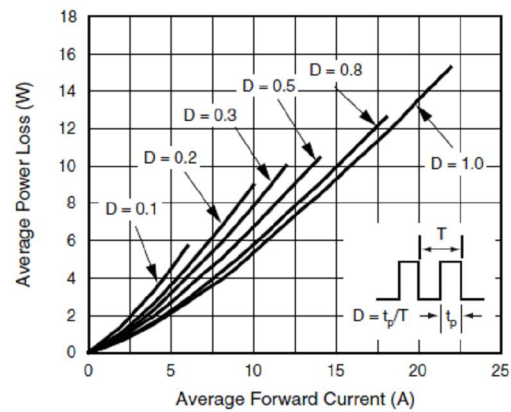


Fig. 2 - Forward Power Loss Characteristics Per Diode

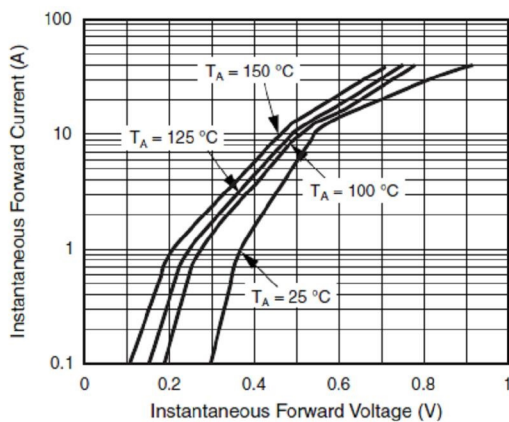


Fig. 3 - Typical Instantaneous Forward Characteristics Per Diode

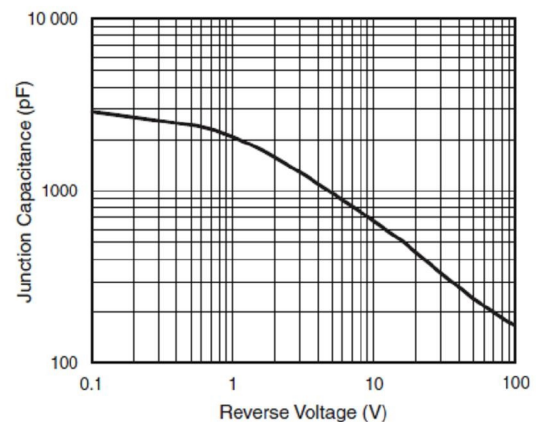


Fig. 4 - Typical Junction Capacitance Per Diode

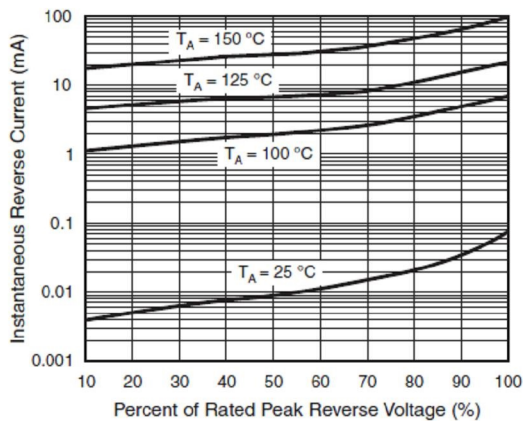


Fig. 5 - Typical Reverse Characteristics Per Diode

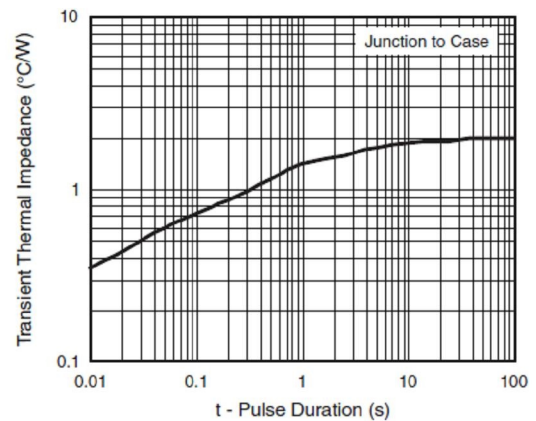
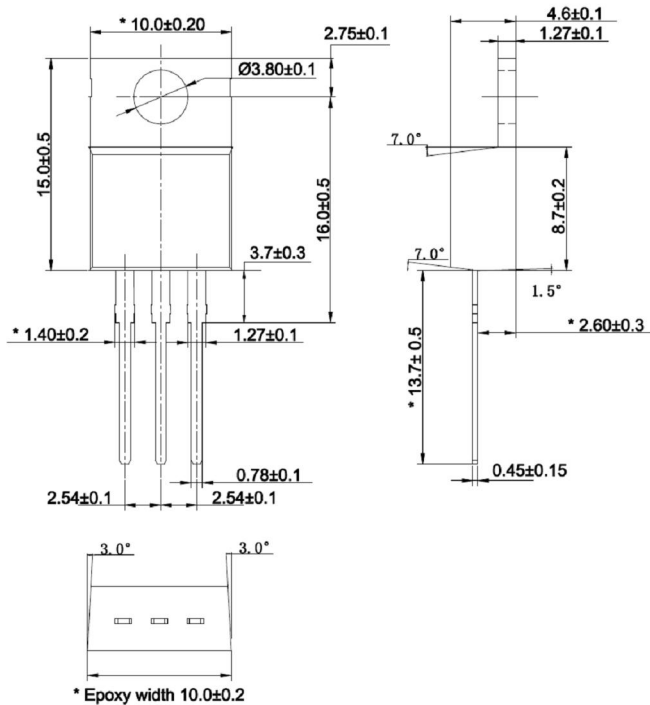


Fig. 6 - Typical Transient Thermal Impedance Per Diode

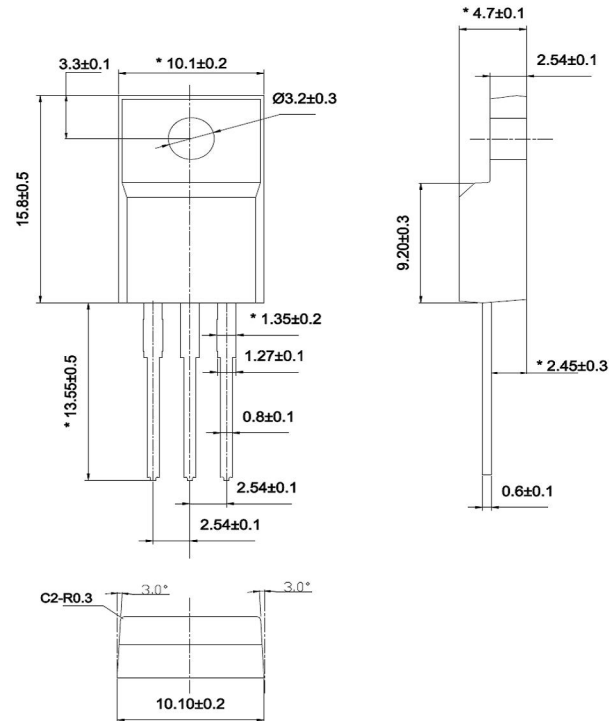
Package Outline Dimensions

Unit: millimeters

TO-220-AB



ITO-220-AB



TO-263

