SBR(X)20300S

Trench Schottky Barrier Rectifier

Reverse Voltage 300 Volts Forward Current 20 Amperes

Features

Ultra Low V_F=0.71V at IF=3A (25°C)

Ultra Low V_F=0.81V at IF=10A (25°C)

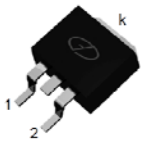
- Low forward voltage drop, low power losses
- High efficiency operation
- Plastic package has underwriters Laboratory Flammability Classification 94V-0

Package: ITO-220-AB

SBRF20300S

Package: TO-220-AB

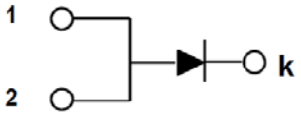
SBR20300S



Package: TO-263

SBRB20300S

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)

Maximum Ratings & Electrical Characteristics

(T_A=25℃ unless otherwise noted)

PARAMETER	TEST CONDITIONS		SYMBOL	SBR(X)20300S	UNIT
Maximum repetitive peak reverse voltage			V_{RRM}	300	V
Working peak reverse voltage			V_{RWM}	300	V
Maximum DC blocking voltage			V_{DC}	300	V
Maximum average forward rectified current at T_C=105°C total device per diode			$I_{F(AV)}$	20	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load per diode			I_{FSM}	150	A
Peak repetitive reverse current per leg at t_p=2.0us ,1KHz			I_{RRM}	2.0	A
Voltage rate of change（rated V_R）			$D_{V/dt}$	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
Maximum instantaneous forward voltage per leg	I_F=10A I_F=10A	T_C=25℃ T_C=125℃	V_F	0.86(0.81TYP) 0.81	V
Maximum reverse current per leg at working peak Reverse voltage		T_J=25℃ T_J=100°C	I_R	200 15	uA mA

Thermal Characteristics T_A=25℃ unless otherwise noted

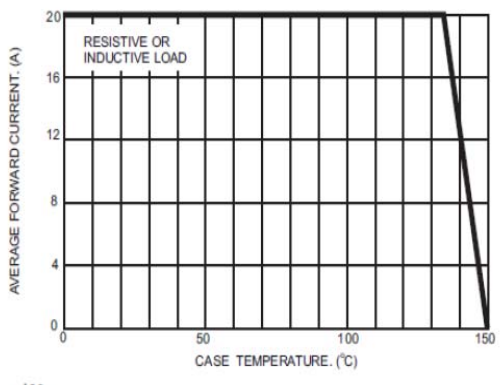
Symbol	Parameter	TYP（TO-220-AB/TO263）	TYP（ITO-220-AB）	Unit
RθJC	Thermal Resistance, Junction to Case per Leg	2.0	4.0	°C /W
RθJA	Thermal Resistance, Junction to Ambient per Leg	62.5	62.5	°C /W

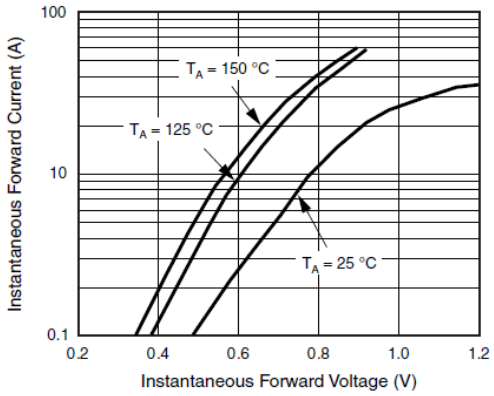
Note： Pulse test:300us pulse width, duty cycle=2%

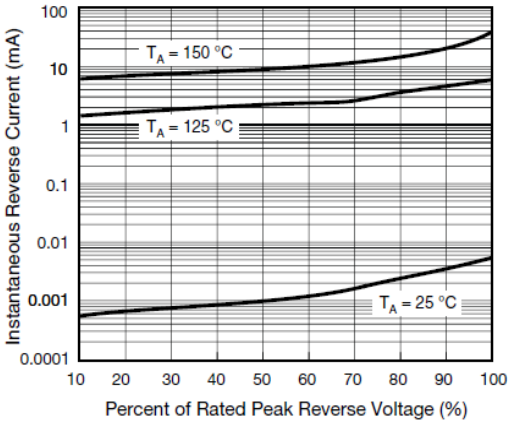
Ratings and Characteristics Curves

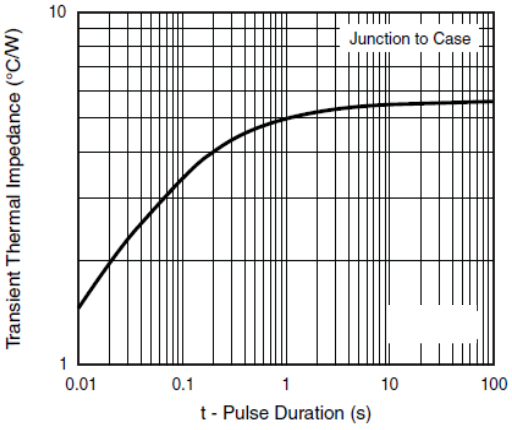
(T_A = 25℃ unless otherwise noted)

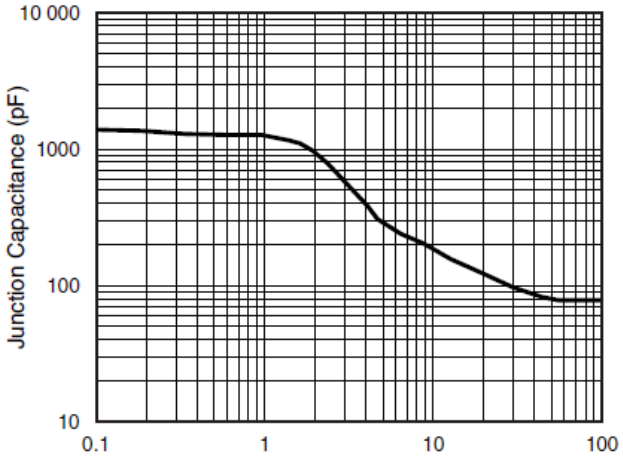
FIG.1- FORWARD CURRENT DERATING CURVE







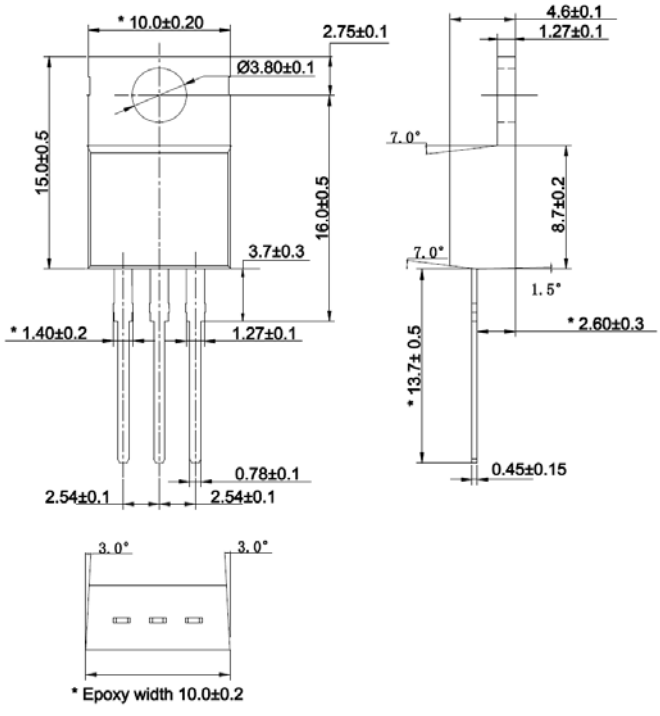




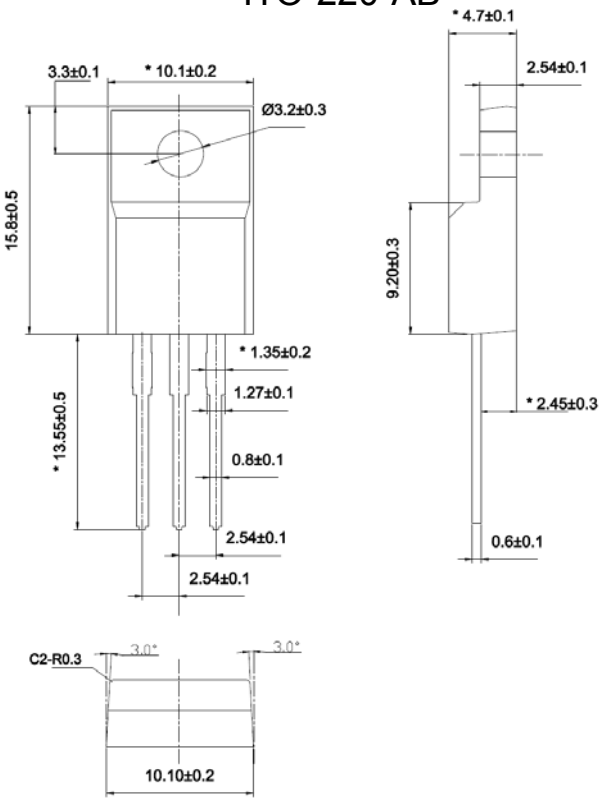
Package Outline Dimensions

Unit: millimeters

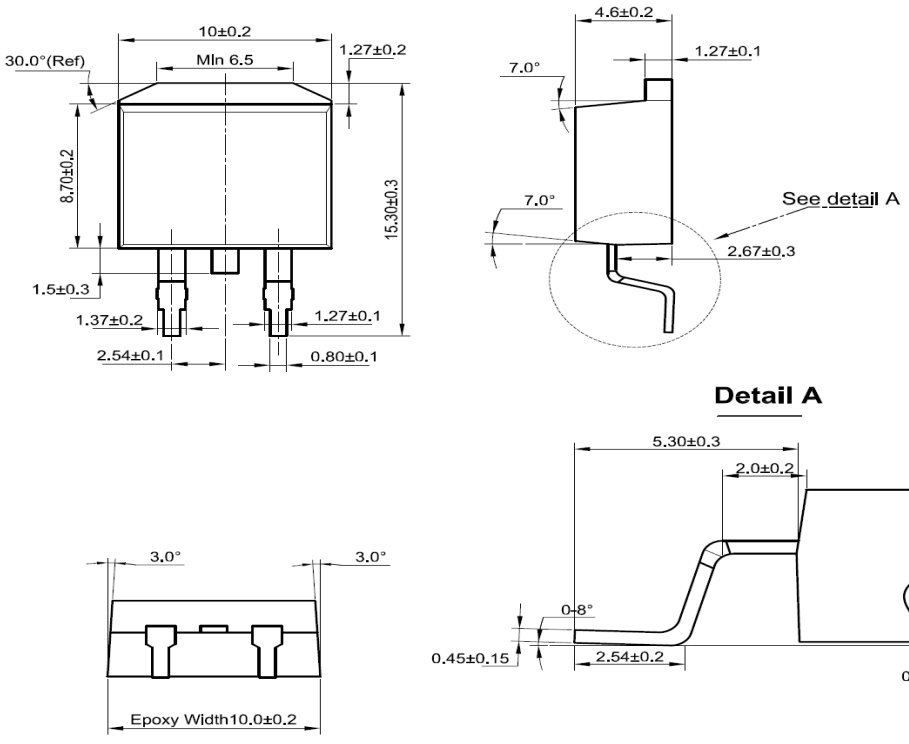
TO-220-AB



ITO-220-AB



TO-263



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