

Features

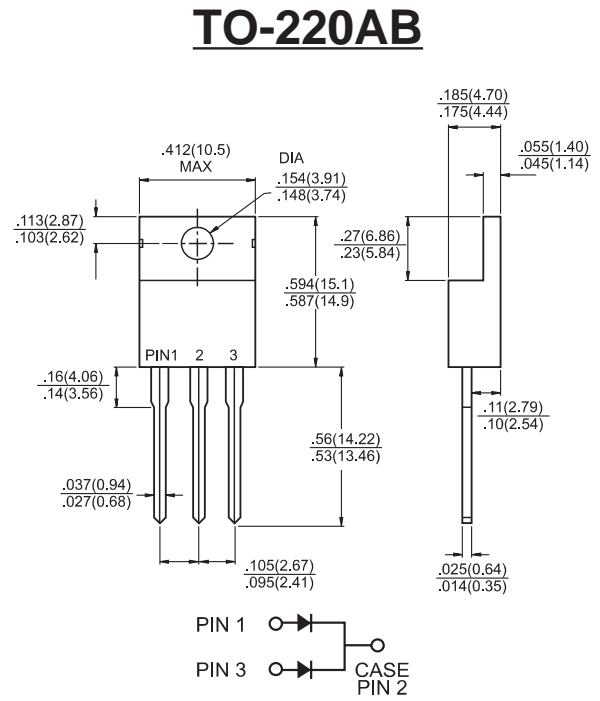
- ◇ Superfast recovery times-epitaxial construction
- ◇ Low forward voltage,High current capability
- ◇ Low Power loss
- ◇ Fast switching for high efficiency
- ◇ Excellent low reverse leakages
- ◇ Excellent high temperature stability
- ◇ Low stored charge majority carrier conduction
- ◇ High forward surge capability
- ◇ Lead free finish ,Rohs and WEEE compliant.

Applications

- ◇ DC to DC converter
- ◇ Switching mode converters and inverters
- ◇ Lighting application
- ◇ Power Supply-output rectification
- ◇ Power Management
- ◇ Freewheeling application

Mechanical Data

- ◇ Moisture Sensitivity: MSL Level 1,per J-STD-020
- ◇ Terminals:Matte Tin Finish.
Solderable per MIL-STD-202 Method 208
- ◇ Case Material: Molded Plastic;
Molding compound meet UL Flammability Classification Rating 94V-0
- ◇ Case:JEDEC TO-220AB



Dimensions in inches and (millimeters)

MAXIMUM RATING

Ratings at 25°C ambient temperature unless otherwise specified.

PARAMETER	SYMBOL	VALUE	UNITS
Maximum repetitive peak reverse voltage	V_{RRM}	200	V
Maximum RMS voltage	V_{RWS}	140	V
Maximum DC blocking voltage	V_{DC}	200	V
Maximum average forward rectified current T _c =120°C	$I_{F(AV)}$	Total diode	20.0
		Per leg	10.0
Peak forward surge current 8.3ms half-sine-wave	I_{FSM}	100	A
I ² t Rating for Fusing (t<8.3ms)	I ² t	41.5	A ² s
Typical Thermal Resistance	R _{θJA}	60	°C/W
	R _{θJC}	3.0	°C/W
Junction temperature	T _J	150	°C
Storage temperature range	T _{STG}	-55~150	°C

ELELTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITIONS	SYMBOL	VALUE			UNITS
			Min	Typ	Max	
Breakdown voltage per diode(min)	IR=0.01mA	VB _R	200	-	-	V
Instantaneous forward voltage	IF=10.0A	TA= 25°C	VF	-	0.975	V
	per leg	TA= 100°C	VF	-	0.895	V
Maximum DC reverse current @Rated DC Blocking Vlotage	TA= 25°C		IR	-	10	μ A
	TA=100°C		IR	-	1000	μ A
Revese Recovery Time (IF=0.5A, IR=1.0A, IRR=0.25A)			trr	-	25	ns

ODERING PACK INFORMATION

Part No.	Packge	Pcking	Box Size L×W×H(mm)	Quatity(pcs/box)	Carton Size L×W×H(mm)	Quatity(pcs/carton)
BYW51-200	TO-220AB	50pcs/Tube	558×148×38	1000	565×225×170	5000

RATING AND CHARACTERISTICS CURVES

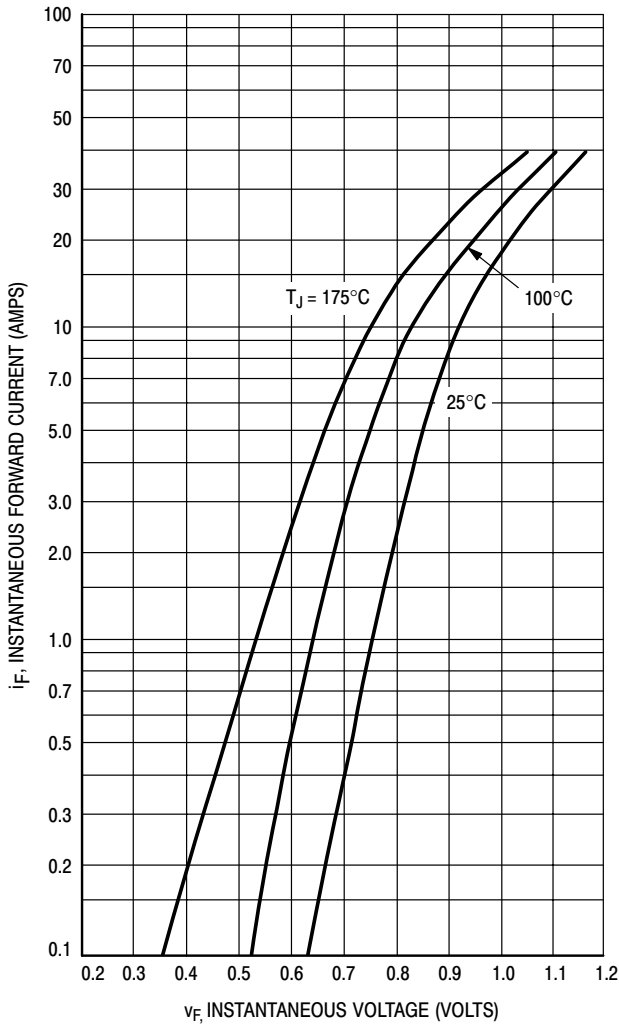


Figure 1. Typical Forward Voltage, Per Leg

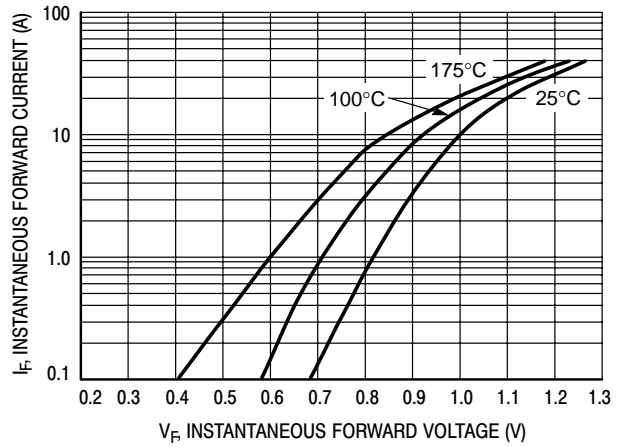


Figure 2. Maximum Forward Voltage

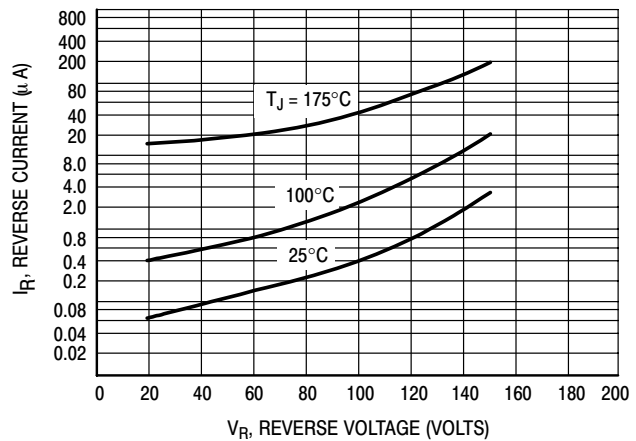


Figure 3. Typical Reverse Current, Per Leg*

* The curves shown are typical for the highest voltage device in the voltage grouping. Typical reverse current for lower voltage selections can be estimated from these same curves if V_R is sufficiently below rated V_R .

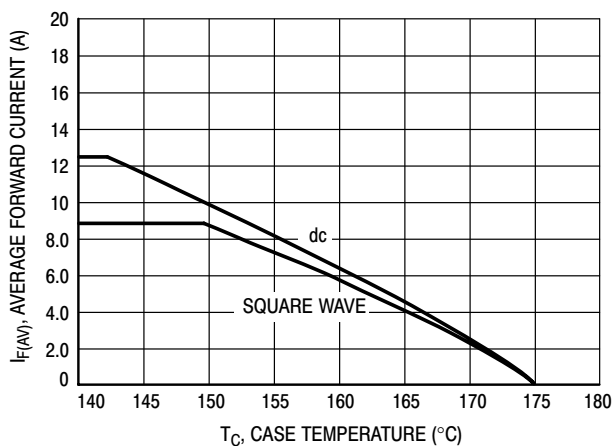


Figure 4. Current Derating, Case, Per Leg

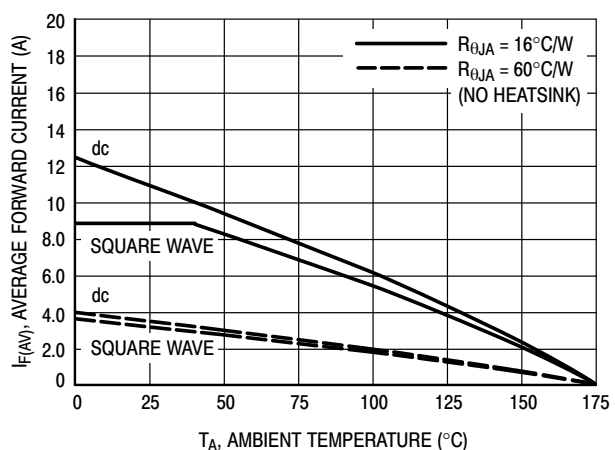


Figure 5. Current Derating, Ambient, Per Leg

RATING AND CHARACTERISTICS CURVES

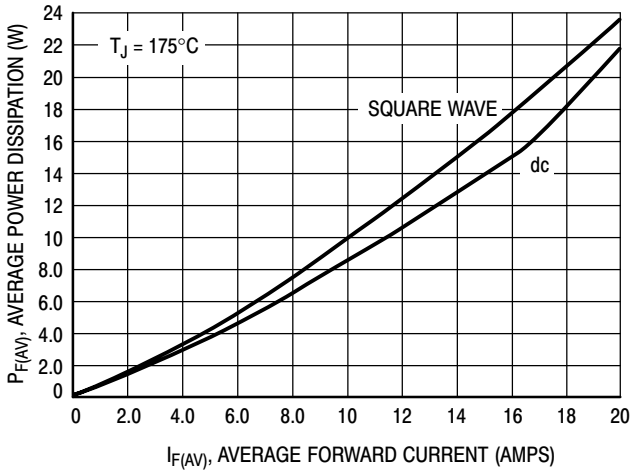


Figure 6. Power Dissipation, Per Leg

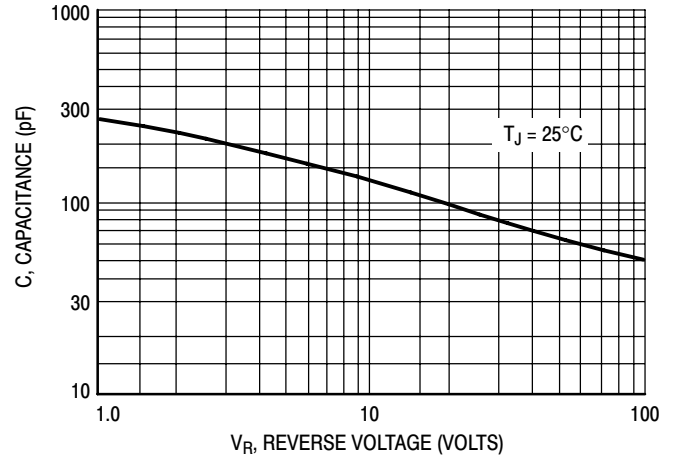


Figure 7. Typical Capacitance, Per Leg

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