



ELECTRICAL CHARACTERISTICS (T <sub>C</sub> = 25 °C unless otherwise noted)						
PARAMETER	TEST CONDITIONS		SYMBOL	UG8HCT	UG8JCT	UNIT
Max. instantaneous forward voltage per diode <sup>(1)</sup>	I <sub>F</sub> = 4 A	T <sub>J</sub> = 25 °C	V <sub>F</sub>	1.75		V
	I <sub>F</sub> = 4 A	T <sub>J</sub> = 125 °C		1.50		
Max. DC reverse current per diode at V <sub>RWM</sub>		T <sub>J</sub> = 25 °C	I <sub>R</sub>	30		μA
		T <sub>J</sub> = 100 °C		800		μA
		T <sub>J</sub> = 125 C		4		mA
Max. reverse recovery time per diode	I <sub>F</sub> = 0.5 A, I <sub>R</sub> = 1.0 A, I <sub>rr</sub> = 0.25 A		t <sub>rr</sub>	25		ns
Max. reverse recovery time per diode	I <sub>F</sub> = 1.0 A, dI/dt = 50 A/μs, V <sub>R</sub> = 30 V, I <sub>rr</sub> = 0.1 I <sub>RM</sub>		t <sub>rr</sub>	50		ns
Typical softness factor (t <sub>b</sub> /t <sub>a</sub> )	I <sub>F</sub> = 4.0 A, dI/dt = 240 A/μs, V <sub>R</sub> = 400 V, I <sub>rr</sub> = 0.1 I <sub>RM</sub>		S	0.9		-
Max. reverse recovery current per diode	I <sub>F</sub> = 4.0 A, dI/dt = 32 A/μs, V <sub>R</sub> = 400 V, T <sub>C</sub> = 125 °C		I <sub>RM</sub>	3.0		A
Max. reverse recovery current per diode	I <sub>F</sub> = 4.0 A, dI/dt = 240 A/μs, V <sub>R</sub> = 400 V, T <sub>C</sub> = 125 °C		I <sub>RM</sub>	8.0		A
Peak forward recovery time per diode	I <sub>F</sub> = 4.0 A, dI/dt = 64 A/μs, V <sub>F</sub> = 1.1 V <sub>Fmax</sub> .		t <sub>fr</sub>	500		ns

**Note**(1) Pulse test: 300  $\mu\text{s}$  pulse width, 1 % duty cycle

THERMAL CHARACTERISTICS ( $T_C = 25\text{ }^{\circ}\text{C}$ unless otherwise noted)					
PARAMETER	SYMBOL	UG8	UGF8	UGB8	UNIT
Typical thermal resistance from junction to case per diode	$R_{\theta JC}$	3.5	6.0	3.5	$^{\circ}\text{C}/\text{W}$

ORDERING INFORMATION (Example)					
PACKAGE	PREFERRED P/N	UNIT WEIGHT (g)	PACKAGE CODE	BASE QUANTITY	DELIVERY MODE
TO-220AB	UG8JCT-E3/45	1.85	45	50/tube	Tube
ITO-220AB	UGF8JCT-E3/45	2.00	45	50/tube	Tube
TO-263AB	UGB8JCT-E3/45	1.35	45	50/tube	Tube
TO-263AB	UGB8JCT-E3/81	1.35	81	800/reel	Tape and reel
ITO-220AB	UGF8JCTHE3/45 <sup>(1)</sup>	2.00	45	50/tube	Tube
TO-263AB	UGB8JCTHE3/45 <sup>(1)</sup>	1.35	45	50/tube	Tube
TO-263AB	UGB8JCTHE3/81 <sup>(1)</sup>	1.35	81	800/reel	Tape and reel

**Note**

(1) AEC-Q101 qualified, available in ITO-220AB and TO-263AB package



## RATINGS AND CHARACTERISTICS CURVES ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

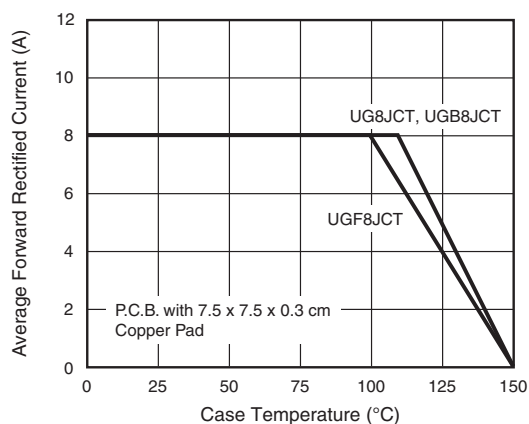


Fig. 1 - Max. Forward Current Derating Curve

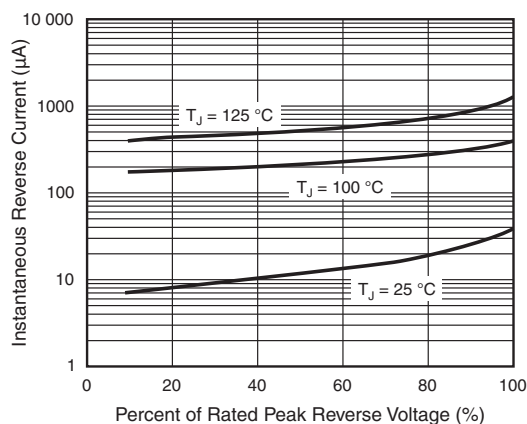


Fig. 4 - Typical Reverse Leakage Characteristics Per Diode

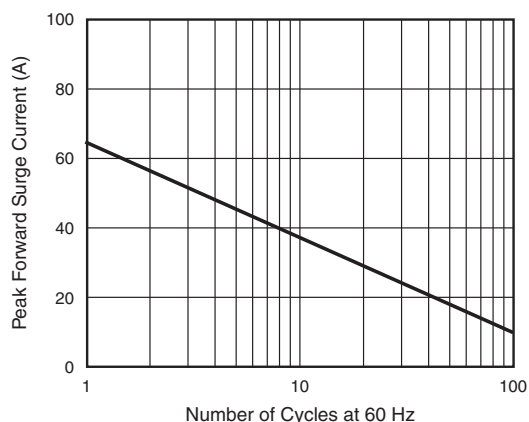


Fig. 2 - Max. Non-Repetitive Peak Forward Surge Current Per Diode

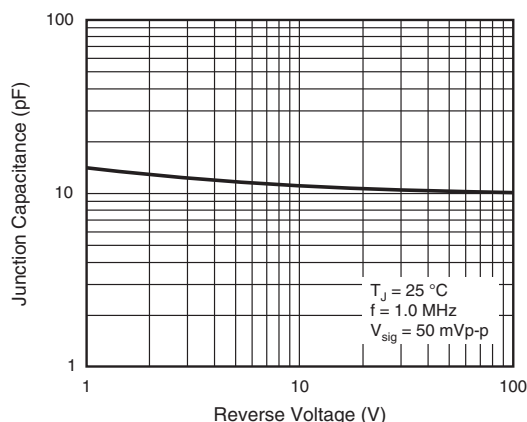


Fig. 5 - Typical Junction Capacitance Per Diode

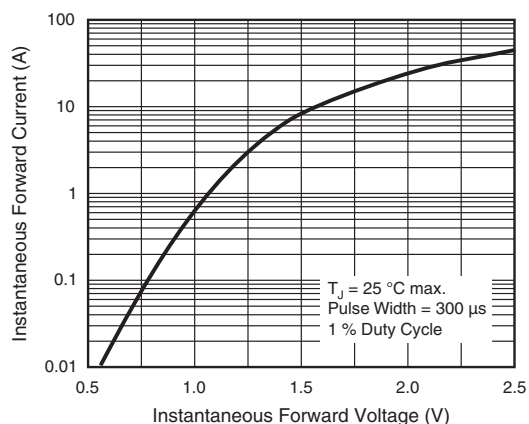


Fig. 3 - Typical Instantaneous Forward Characteristics Per Diode

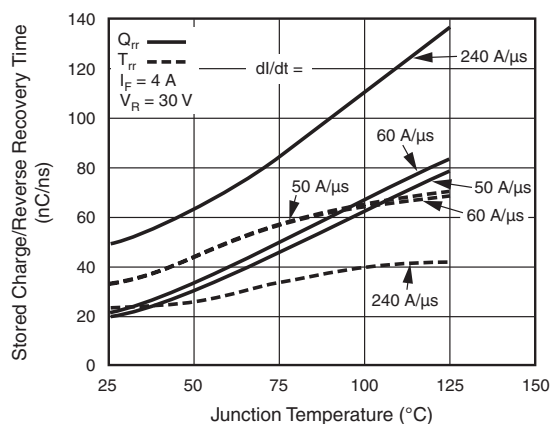
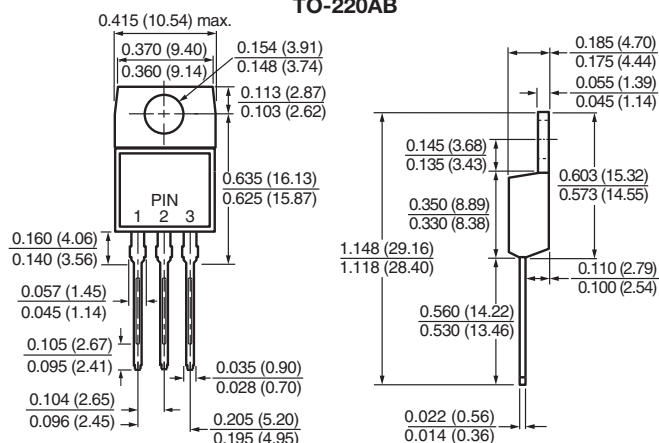


Fig. 6 - Reverse Switching Characteristics Per Diode

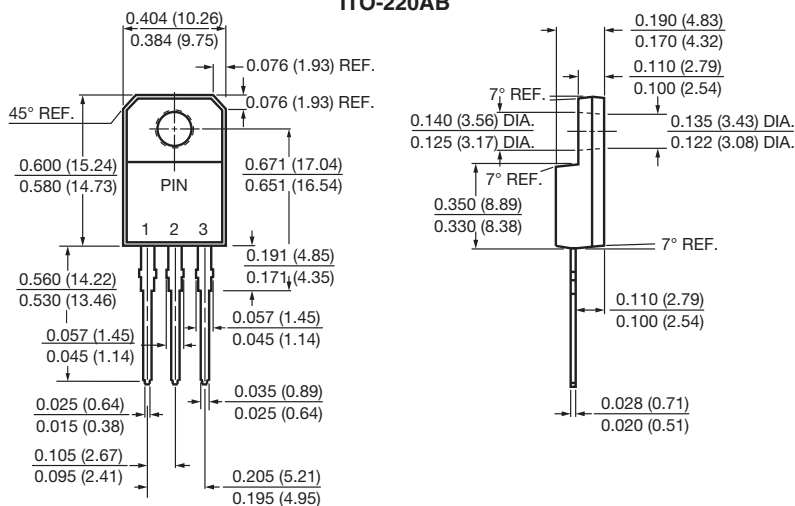


## PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

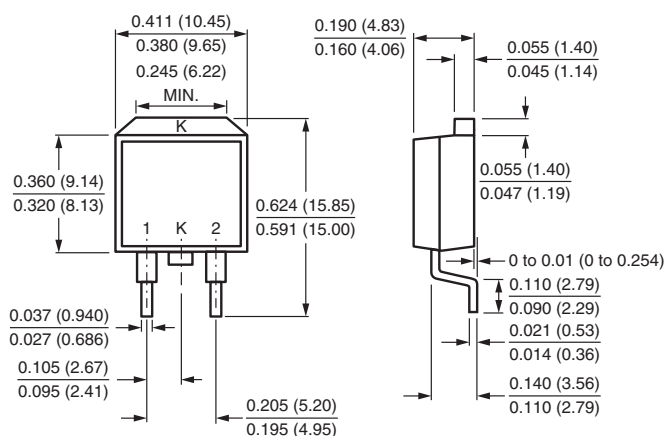
TO-220AB



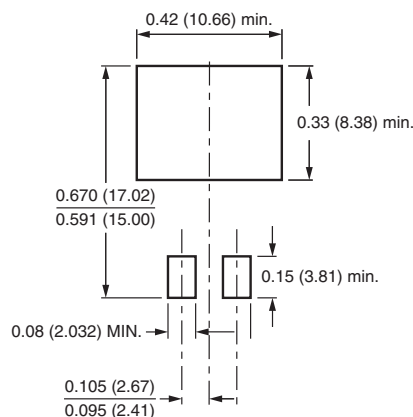
ITO-220AB



D<sup>2</sup>PAK (TO-263AB)



Mounting Pad Layout





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