



ELECTRICAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)						
PARAMETER	SYMBOL	TEST CONDITIONS		TYP.	MAX.	UNIT
Maximum instantaneous forward voltage	V _F ⁽¹⁾	I _F = 15 A	T _J = 25 °C	0.54	-	V
		I _F = 30 A		0.65	0.70	
		I _F = 15 A	T _J = 125 °C	0.46	-	
		I _F = 30 A		0.61	0.66	
Maximum instantaneous reverse current at DC blocking voltage	I _R ⁽²⁾	Rated V _R	T _J = 25 °C	40	200	μA
			T _J = 125 °C	26	55	mA
Typical junction capacitance	C _J	4.0 V, 1 MHz		980		pF

Note(1) Pulse test: 300 μs pulse width, 1 % duty cycle(2) Pulse test: Pulse width $\leq 40\text{ ms}$

THERMAL CHARACTERISTICS ($T_A = 25\text{ }^{\circ}\text{C}$ unless otherwise noted)					
PARAMETER	SYMBOL	M30xxS	MB30xxS	MI30xxS	UNIT
Typical thermal resistance	$R_{\theta JC}$	2.0			$^{\circ}\text{C/W}$

ORDERING INFORMATION (Example)					
PACKAGE	PREFERRED P/N	UNIT WEIGHT (g)	PACKAGE CODE	BASE QUANTITY	DELIVERY MODE
TO-220AB	M3045S-E3/4W	1.878	4W	50/tube	Tube
TO-263AB	MB3045S-E3/4W	1.37	4W	50/tube	Tube
TO-263AB	MB3045S-E3/8W	1.37	8W	800/reel	Tape and reel
TO-263AA	MI3045S-E3/4W	1.454	4W	50/tube	Tube

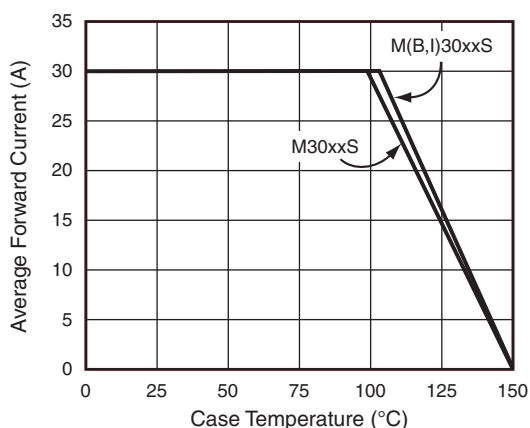
RATINGS AND CHARACTERISTICS CURVES ($T_A = 25\text{ }^{\circ}\text{C}$ unless otherwise noted)

Fig. 1 - Forward Current Derating Curve

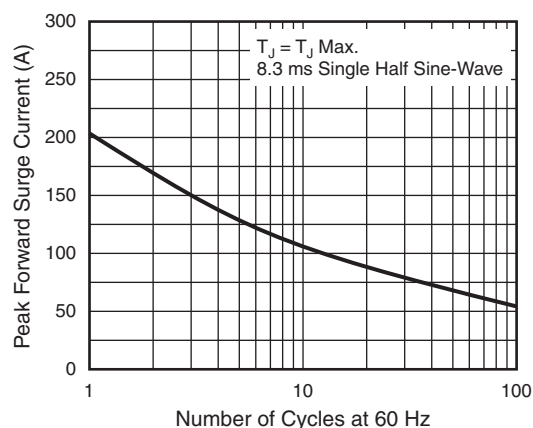


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

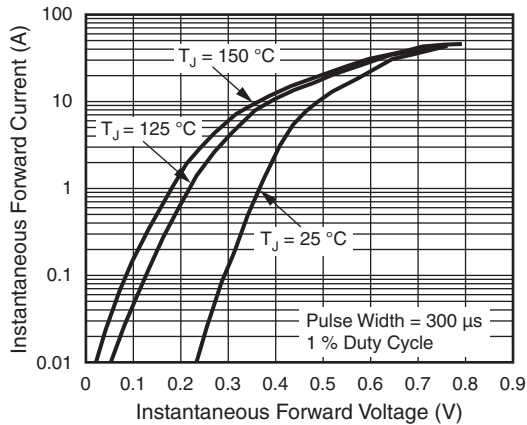


Fig. 3 - Typical Instantaneous Forward Characteristics

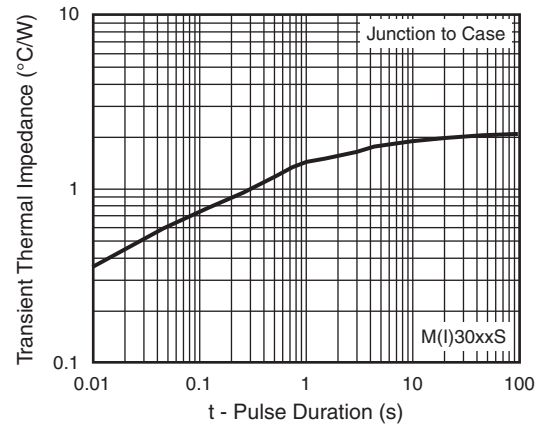


Fig. 6 - Typical Transient Thermal Impedance

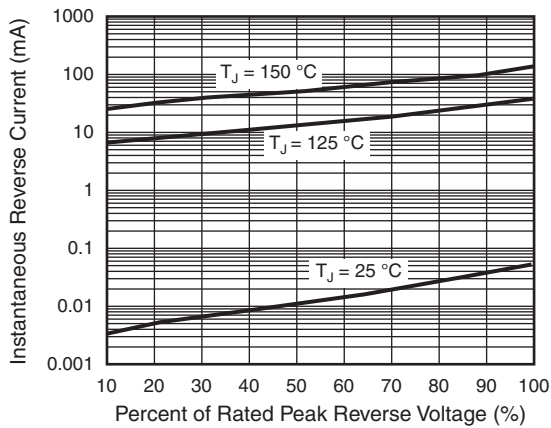


Fig. 4 - Typical Reverse Characteristics

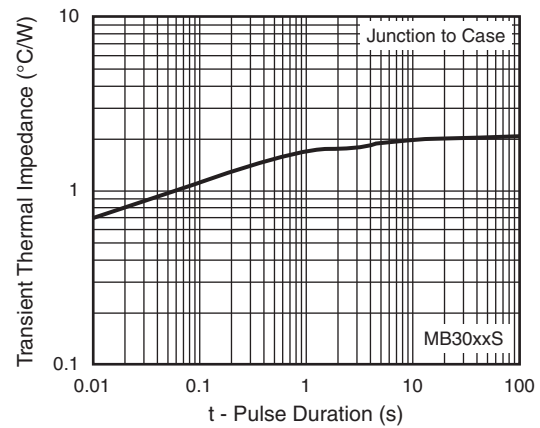


Fig. 7 - Typical Transient Thermal Impedance

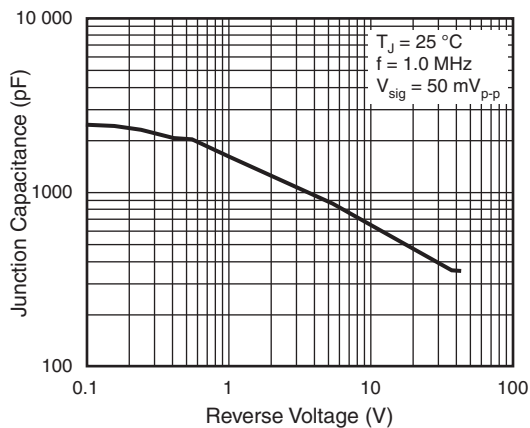
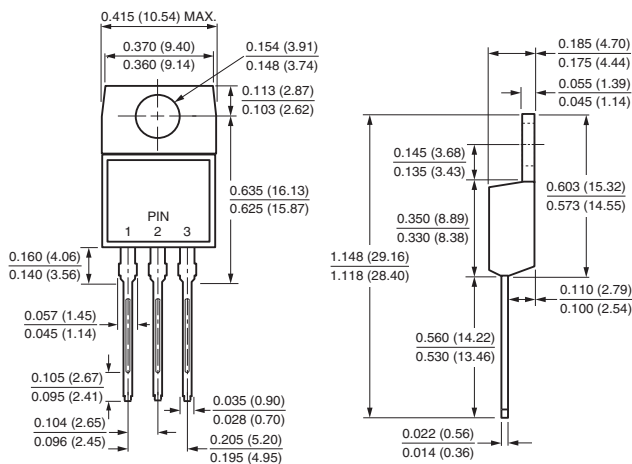


Fig. 5 - Typical Junction Capacitance

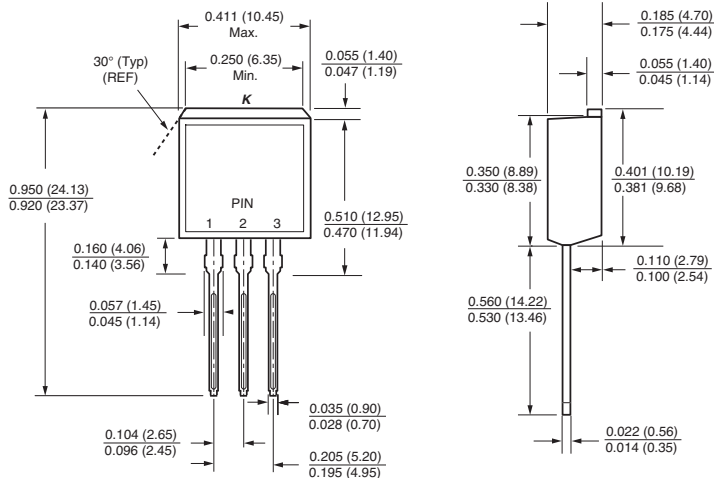


PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

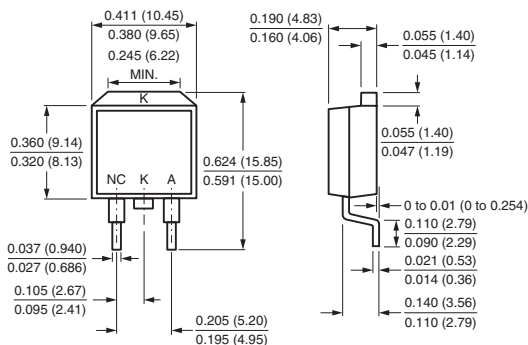
TO-220AB



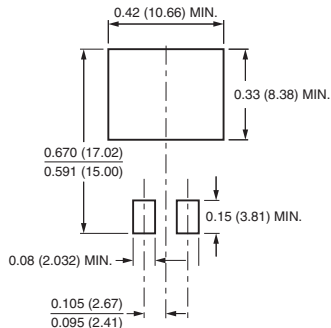
TO-262AA



TO-263AB



Mounting Pad Layout





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