

MR2540AL

V_R : 20 Volts
I_o : 6 Amperes

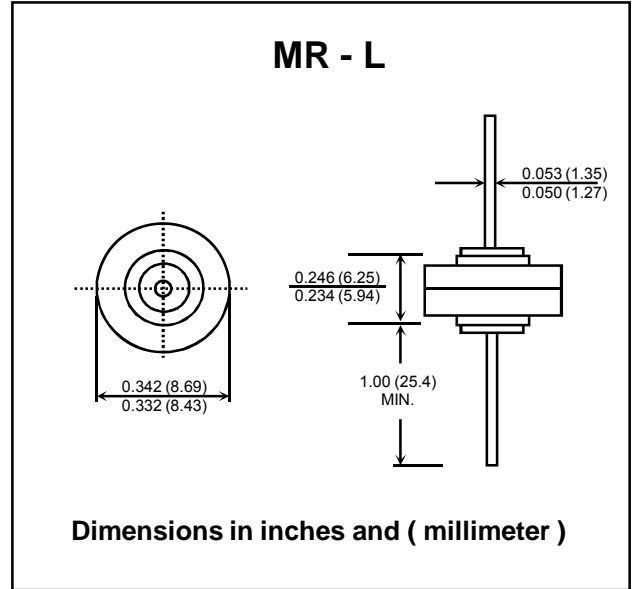
FEATURES :

- * Breakdown Voltage 24 to 32 Volts
- * High Power capability
- * Increased Capacity by Parallel Operation
- * Pb / RoHS Free

MECHANICAL DATA :

- * Case : Molded plastic
- * Epoxy : UL94V-O rate flame retardant
- * Lead : Axial lead solderable per MIL-STD-202, Method 208 guaranteed
- * Polarity : Color band denotes cathode end
- * Mounting position : Any
- * Weight : 2.69 grams

AUTOMOTIVE TRANSIENT VOLTAGE SUPPRESSOR



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified.

RATING	SYMBOL	VALUE	UNIT
Maximum DC Peak Repetitive Reverse Voltage	V _{RRM}	20	V
Maximum Working Peak Reverse Voltage	V _{RWM}	20	V
Maximum DC Blocking Voltage	V _R	20	V
Maximum Breakdown Voltage (I _R = 100 mA, T _c = 25 °C) ⁽¹⁾	V _{BR(max)}	32	V
Minimum Breakdown Voltage (I _R = 100 mA, T _c = 25 °C) ⁽¹⁾	V _{BR(min)}	24	V
Maximum Average Rectified Forward Current (Single Phase, Resistive Load, 60 Hz, T _c = 150 °C)	I _{F(AV)}	6	A
Maximum Repetitive Peak Reverse Surge Current (Time Constant = 10 ms, Duty Cycle ≤ 1%, T _c = 25 °C)	I _{RSM}	85	A
Maximum Non-Repetitive Peak Surge Current Surge Supplied at Rated Load Conditions, Halfwave, Single Phase	I _{FSM}	800	A
Maximum Instantaneous Forward Voltage (I _F = 100 A, T _c = 25 °C) ⁽¹⁾	V _F	1.1	V
Maximum Reverse Current (V _R = 20 V, T _c = 25 °C)	I _R	200	nA
Typical Breakdown Voltage Temperature Coefficient	V _{(BR)TC}	0.096	%/°C
Typical Forward Voltage Temperature Coefficient @ I _F = 10 mA	V _{FTC}	2.0	mV/°C
Typical Thermal Resistance Junction to Case	R _{θJC}	0.8	°C/W
Operating Junction and Storage Temperature Range	T _J , T _{STG}	- 65 to + 175	°C

Note : (1) Pulse Test : Pulse Width ≤ 300µs, Duty Cycle ≤ 2%.

RATING AND CHARACTERISTIC CURVES (MR2540AL)

FIG.1 - TYPICAL FORWARD VOLTAGE

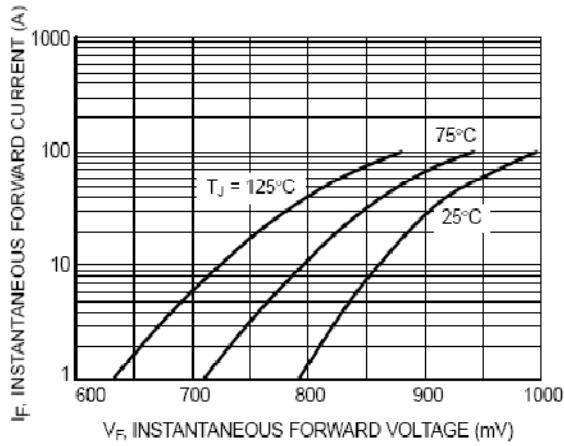


FIG.2 - TYPICAL REVERSE CURRENT VS. JUNCTION TEMPERATURE

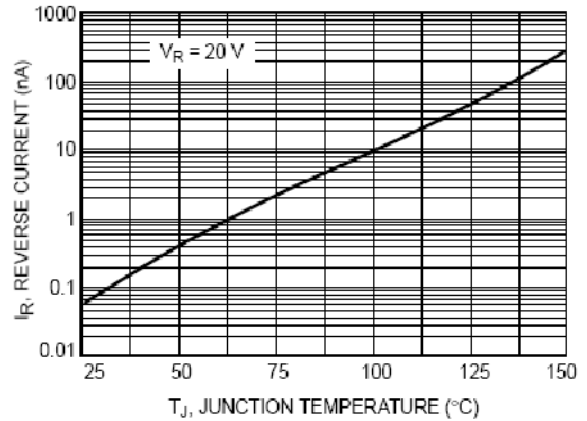


FIG.3 - TYPICAL CAPACITANCE

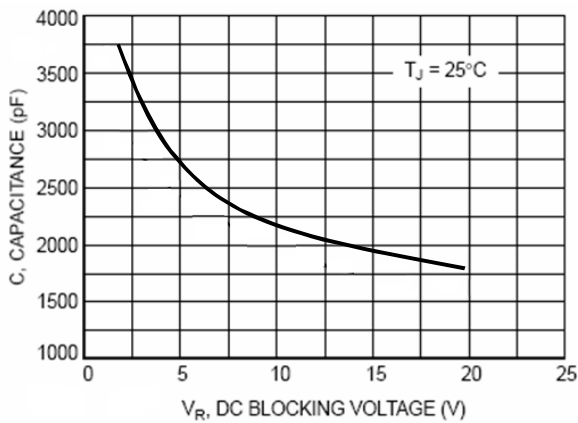


FIG.4 - MAXIMUM CURRENT RATINGS

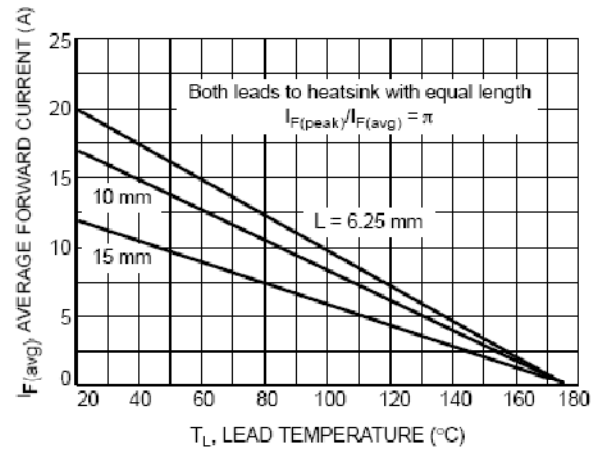


FIG.5 - THERMAL RESPONSE

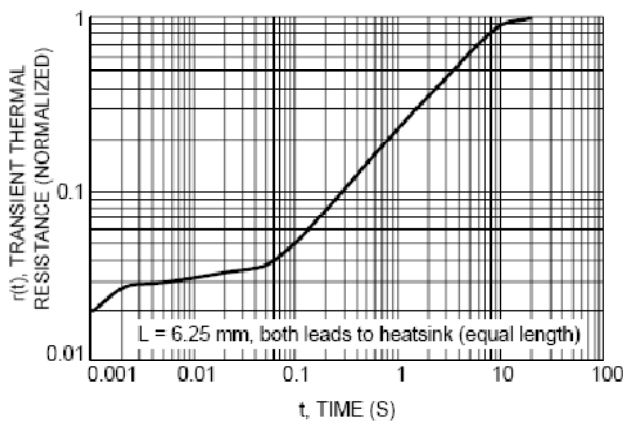
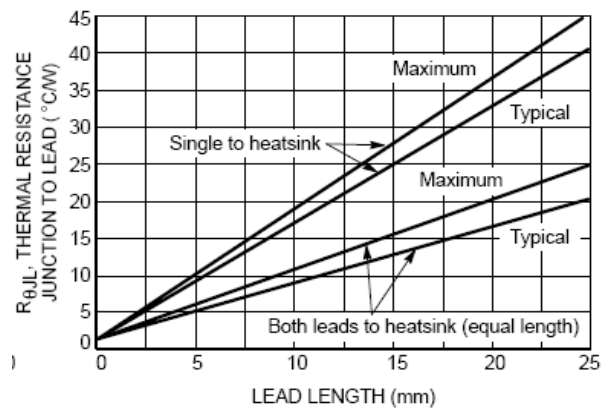


FIG.6 - STEADY STATE THERMAL RESISTANCE



RATING AND CHARACTERISTIC CURVES (MR2540AL)

FIG.7 - MAXIMUM PEAK REVERSE CURRENT

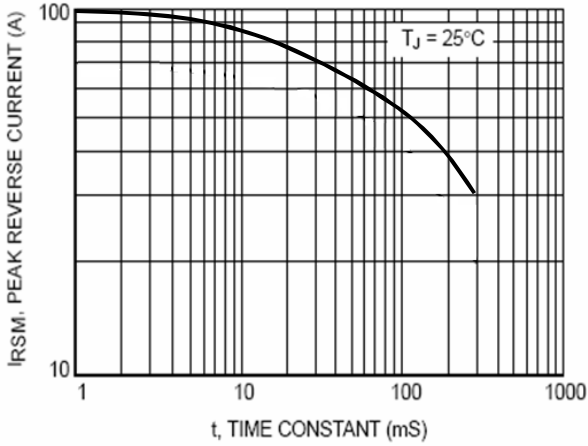


FIG.8 - MAXIMUM PEAK REVERSE POWER

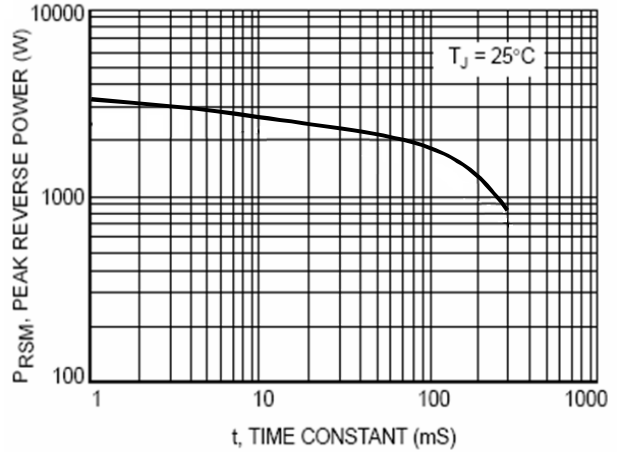


FIG.9 - MAXIMUM REVERSE ENERGY

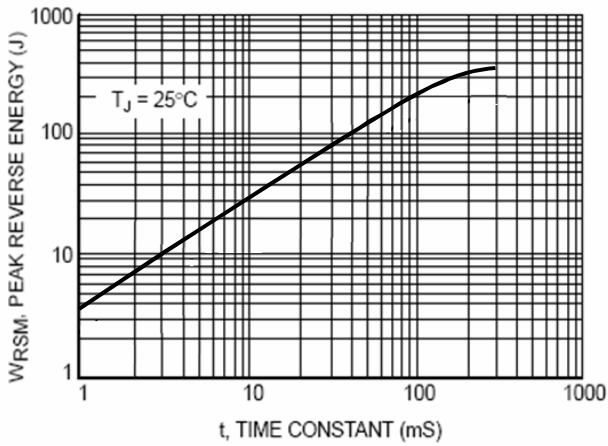


FIG.10 - REVERSE POWER DERATING

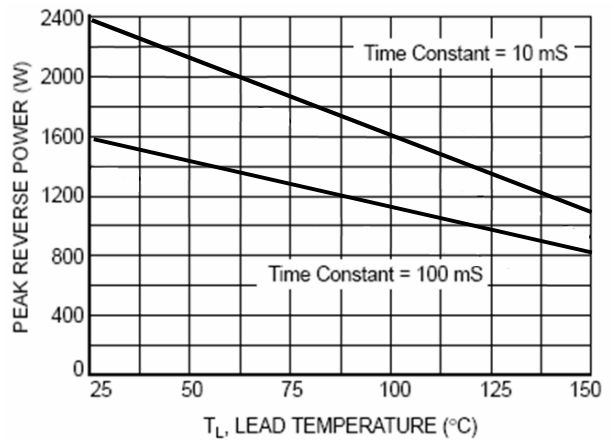


FIG.11 - TYPICAL CLAMPING FACTOR

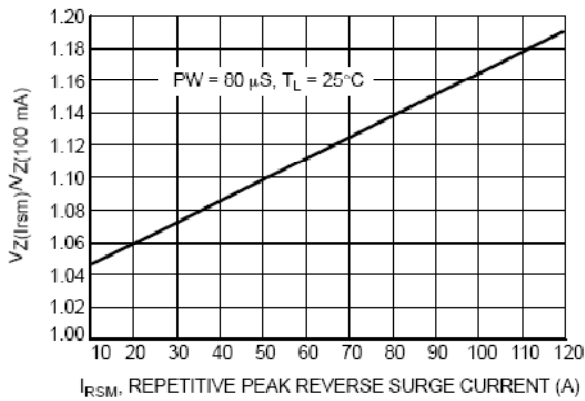


FIG.12 - LOAD DUMP PULSE CURRENT

