

FAST RECOVERY RECTIFIER DIODES

FR251 - FR257 Vishaymas General Semiconductor

FEATURES

- High current capability
- High surge current capability
- High reliability
- Low reverse current
- Low forward voltage drop
- Fast switching for high efficiency

MECHANICAL DATA

Case : D2A Molded plastic

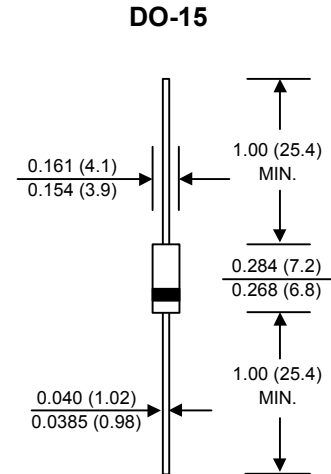
Epoxy : UL94V-O rate flame retardant

Lead : Axial lead solderable per MIL-STD-202,
Method 208 guaranteed

Polarity : Color band denotes cathode end

Mounting position : Any

Weight : 0.645 gram



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%.

RATING	SYMBOL	FR251	FR252	FR253	FR254	FR255	FR256	FR257	UNIT
Maximum Recurrent Peak Reverse Voltage	VRRM	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	VRMS	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	VDC	50	100	200	400	600	800	1000	V
Maximum Average Forward Current 0.375"(9.5mm) Lead Length Ta = 55 °C	IF(AV)	2.5							A
Peak Forward Surge Current, 8.3ms Single half sine wave Superimposed on rated load (JEDEC Method)	IFSM	100							A
Maximum Peak Forward Voltage at IF = 2.5 A	VF	1.3							V
Maximum DC Reverse Current Ta = 25 °C	IR	10							μA
at Rated DC Blocking Voltage Ta = 100 °C	IR(H)	500							μA
Maximum Reverse Recovery Time (Note 1)	Trr	150				250	500		ns
Typical Junction Capacitance (Note 2)	CJ	28							pf
Junction Temperature Range	TJ	- 65 to + 150							°C
Storage Temperature Range	TSTG	- 65 to + 150							°C

Notes :

- (1) Reverse Recovery Test Conditions : IF = 0.5 A, IR = 1.0 A, Irr = 0.25 A.
- (2) Measured at 1.0 MHz and applied reverse voltage of 4.0 Vdc

FIG.1 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

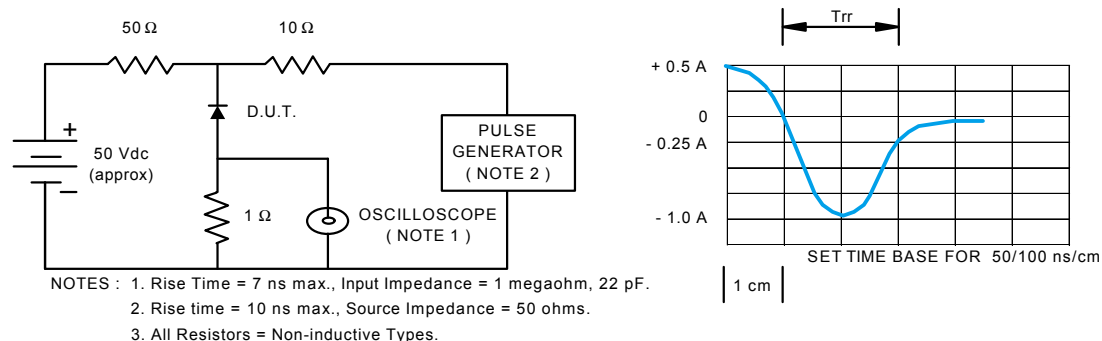


FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

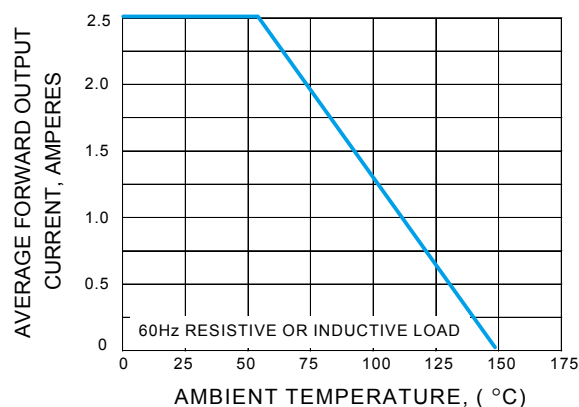


FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

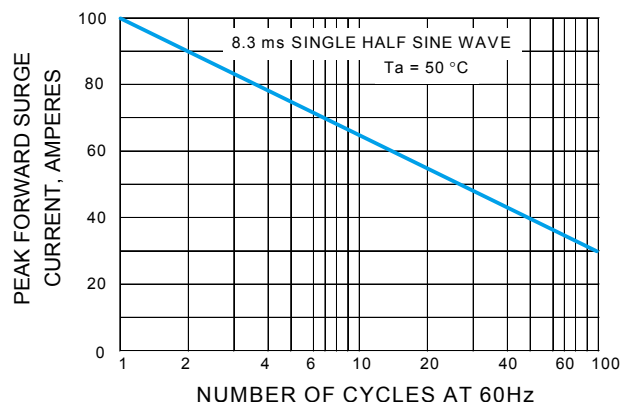


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

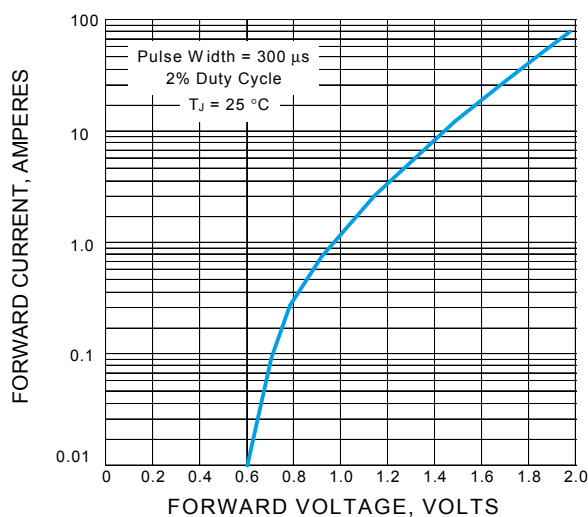


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

