

GLASS PASSIVATED JUNCTION FAST RECOVERY RECTIFIERS

FR101G - FR107G Vishaymas General Semiconductor

FEATURES

- Glass passivated chip
- High current capability
- High reliability
- Low reverse current
- Low forward voltage drop
- Fast switching for high efficiency
- Pb / RoHS Free

MECHANICAL DATA

Case : DO-41 Molded plastic

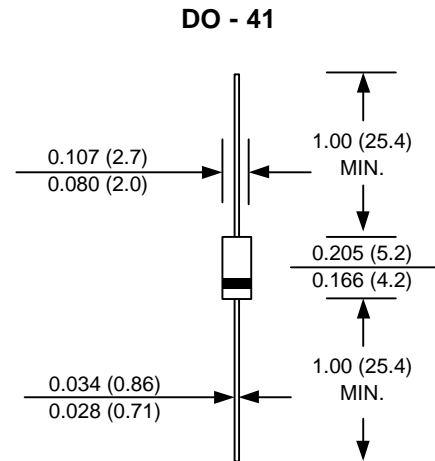
Epoxy : UL94V-O rate flame retardant

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

Polarity : Color band denotes cathode end

Mounting position : Any

Weight : 0.34 gram



Dimensions in inches and (millimeters)

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	FR 101G	FR 102G	FR 103G	FR 104G	FR 105G	FR 106G	FR 107G	FR107G -STR	UNIT
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	50	100	200	400	600	800	1000	1000	V
Maximum RMS Voltage	V _{RMS}	35	70	140	280	420	560	700	700	V
Maximum DC Blocking Voltage	V _{DC}	50	100	200	400	600	800	1000	1000	V
Maximum Average Forward Current 0.375"(9.5mm) Lead Length Ta = 55 °C	I _{F(AV)}	1.0								A
Peak Forward Surge Current, 8.3ms Single half sine wave superimposed on rated load (JEDEC Method)	I _{FSM}	30								A
Maximum Peak Forward Voltage at I _F = 1.0 A	V _F	1.3								V
Maximum DC Reverse Current Ta = 25 °C at Rated DC Blocking Voltage Ta = 125 °C	I _R	5								μA
	I _{R(H)}	150								μA
Maximum Reverse Recovery Time (Note 1)	T _{rr}	150			250		500		250	ns
Typical Junction Capacitance (Note 2)	C _J	15								pf
Junction Temperature Range	T _J	- 65 to + 150								°C
Storage Temperature Range	T _{STG}	- 65 to + 150								°C

Notes :

- (1) Reverse Recovery Test Conditions : I_F = 0.5 A, I_R = 1.0 A, I_{rr} = 0.25 A.
- (2) Measured at 1.0 MHz and applied reverse voltage of 4.0 V_{DC}

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

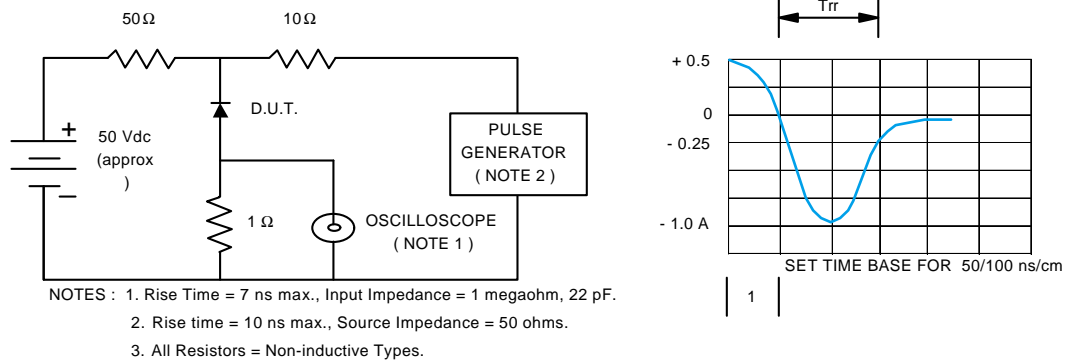


FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

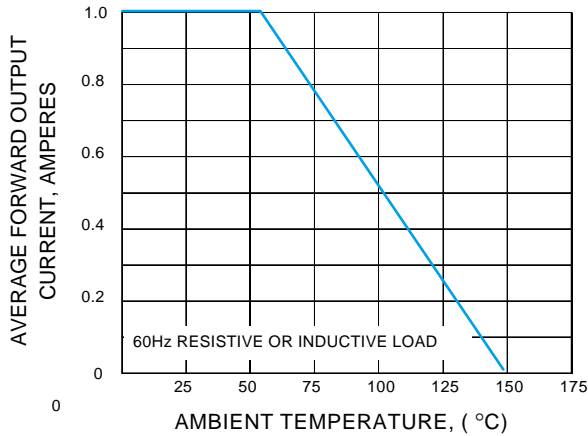


FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

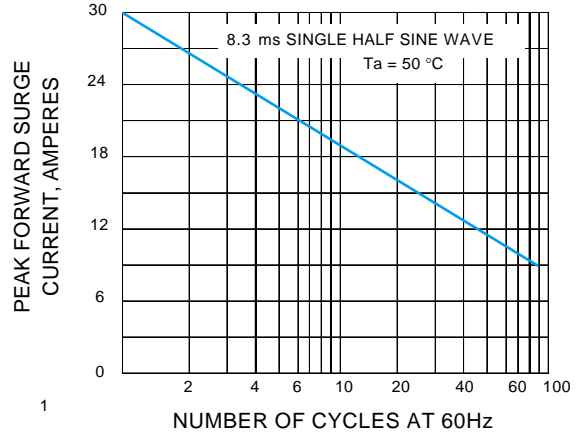


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

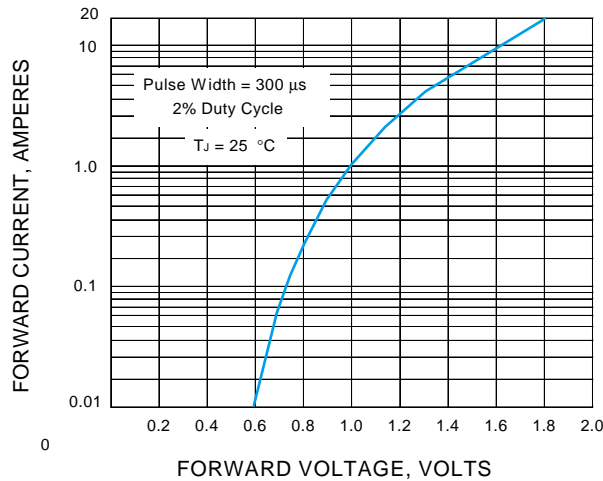


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

