VISHAY MAS 威世马来
GENERAL SEMICONDUCTOR

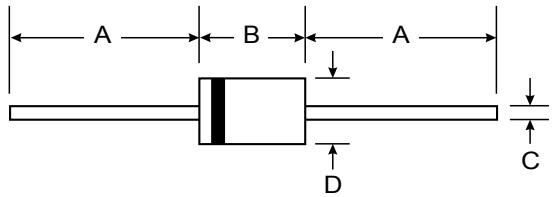
SUPER FAST RECOVERY RECTIFIER DIODES

ER500 - ER506

Vishaymas General Semiconductor

Features

- Diffused Junction
- Low Forward Voltage Drop
- High Current Capability
- High Reliability
- High Surge Current Capability



DO-27		
Dim	**Min**	**Max**
A	25.40	—
B	7.20	9.50
C	1.20	1.30
D	4.80	5.30
All Dimensions in mm		

Mechanical Data

Case: DO-27 Molded Plastic
Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
Polarity: Cathode Band
Weight: 1.2 grams (approx.)
Mounting Position: Any
Marking: Type Number

Maximum Ratings and Electrical Characteristics

@T_A=25°C unless otherwise specified Single Phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Characteristic	Symbol	ER500	ER501	ER501A	ER502	ER503	ER504	ER506	Unit
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	150	200	300	400	600	Volts
Maximum RMS Voltage	V_{RMS}	35	70	105	140	210	280	420	Volts
Maximum DC Blocking Voltage	V_{DC}	50	100	150	200	300	400	600	Volts
Maximum Average Forward Current 0.375"(9.5mm) Lead Length Ta = 55 °C	$I_{F(AV)}$	5.0							Amps.
Peak Forward Surge Current, 8.3ms Single half sine wave Superimposed on rated load (JEDEC Method)	I_{FSM}	135							Amps.
Maximum Peak Forward Voltage at I_F = 5.0 A.	V_F	0.95					1.4		Volts
Maximum DC Reverse Current Ta = 25 °C	I_R	5							µA
at Rated DC Blocking Voltage Ta = 100 °C	$I_{R(H)}$	50							µA
Maximum Reverse Recovery Time (Note 1)	Trr	35							ns
Typical Junction Capacitance (Note 2)	C_J	50							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, Irr = 0.25 A.

(2) Measured at 1.0 MHz and applied reverse voltage of 4.0 V_{DC}

RATING AND CHARACTERISTIC CURVES

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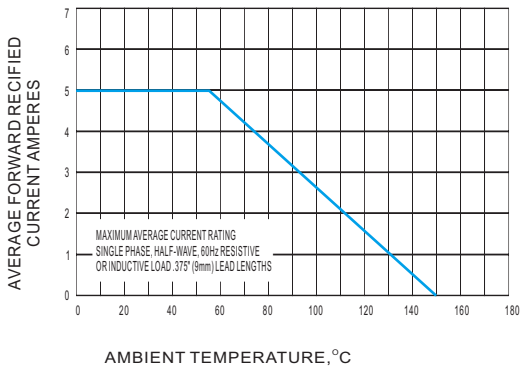

FIG.1MAXIMUMAVERAGEFORWARDCURRENTRATING

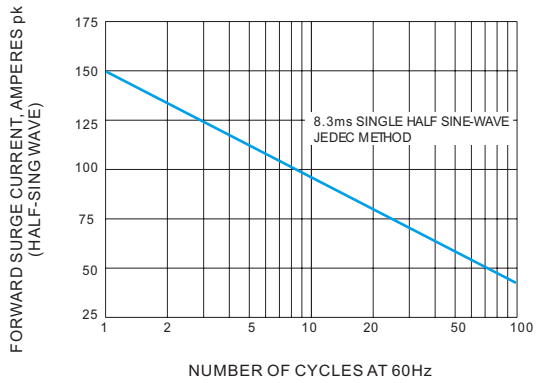

FIG.2MAXIMUMNON-REPEITIVESURGECURRENT

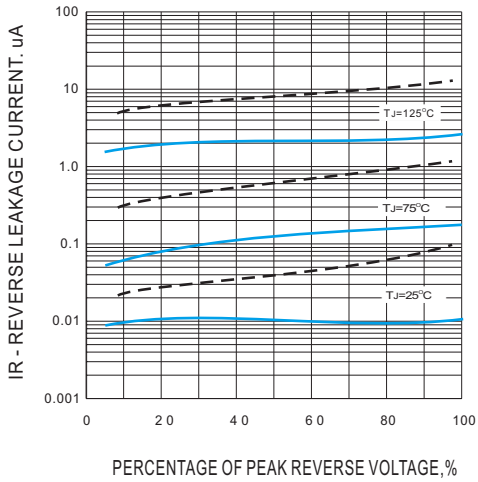

FIG.3TYPICALREVERSECHARACTERISTICS

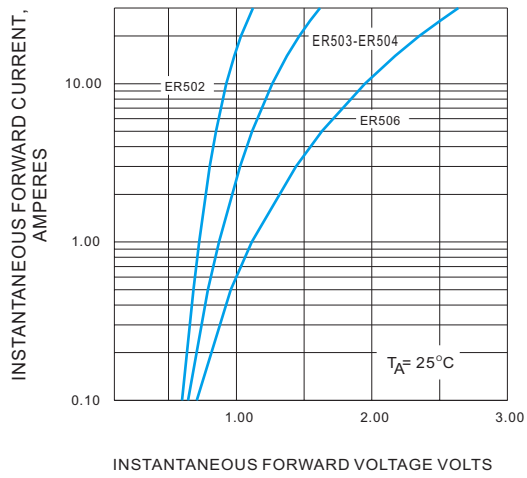

FIG.4TYPICALJUNCTIONCAPACITANCE