SOCAY

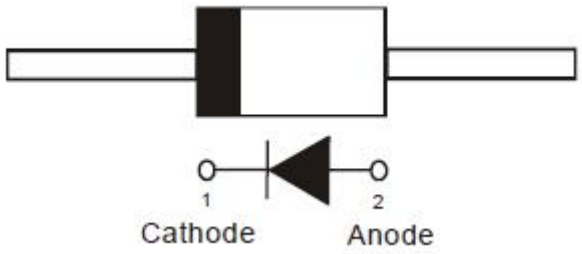
Fast Recovery Diodes

FR101~FR107 | **50 to 1000 V** | **DO-41**

Features

- High current capability.
- Plastic package has Underwriters Laboratories Flammability Classification 94V-0 utilizing Flame Retardant Epoxy Molding Compound.
- Low leakage.
- Fast switching for high efficiency.
- Lead free in compliance with EU RoHS2.0 (2011/65/EU & 2015/865/EU directive)

DO-41



Mechanical Date

- Case: Molded plastic, DO-41
- Terminals: Axial leads, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Weight: 0.0118 ounce, 0.336 gram

Maximum Ratings and Electrical Characteristics

Ratings at 25℃ ambient temperature unless otherwise specified. Resistive or inductive load, 60Hz.

Parameter		Symbol	FR101	FR102	FR103	FR104	FR105	FR106	FR107	Unit
Maximum Recurrent Peak Reverse Voltage		V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage		V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage		V_{DC}	50	100	200	400	600	800	1000	V
Maximum Average Forward Current 0.375"(9.5mm) Lead Length at T_A=55℃		$I_{F(AV)}$	1							A
Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load		I_{FSM}	30							A
Maximum Forward Voltage at 1A		V_F	1.3							V
Maximum DC Reverse Current at Rated DC Blocking Voltage	T_J=25℃	I_R	1							μA
	T_J=100℃		100							
Typical Junction Capacitance (Note 1)		C_J	12							pF
Maximum Reverse Recovery Time		t_{rr}	150				250	500		ns
Typical Thermal Resistance		$R_{\theta JA}$	67							℃/W
Operating and Storage Temperature Range		T_J,T_{STG}	-55 to +150							℃

NOTES:

1. Reverse recovery test conditions: I_F=0.5A, I_R=1A, Irr=0.25A.

2. Measured at 1 MHz and applied reverse voltage of 4 V_{DC}.

3. Thermal resistance from junction to ambient and from junction to lead length 0.375"(9.5mm) P.C.B. mounted.

Fast Recovery Diodes

FR101~FR107 | **50 to 1000 V** | **DO-41**

Rating and Characteristic Curves

Fig1. Forward Current Derating Curve

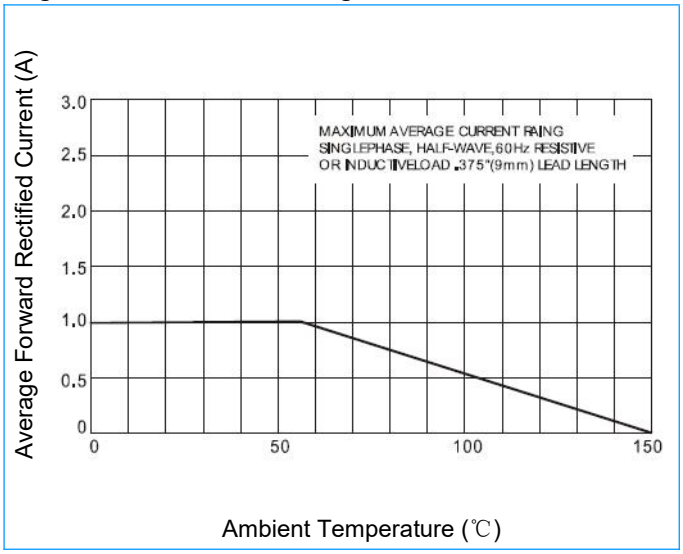


Fig2. Maximum Non-Repeitive Peak Forward Surge Current

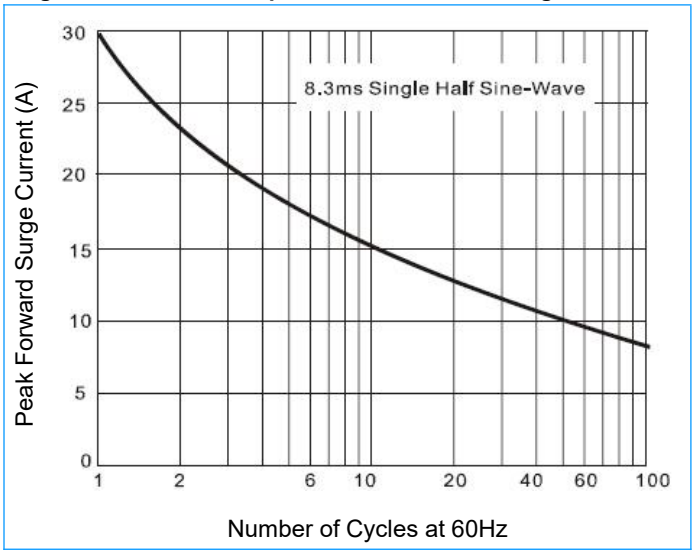


Fig3. Typical Instantaneous Forward Characteristics

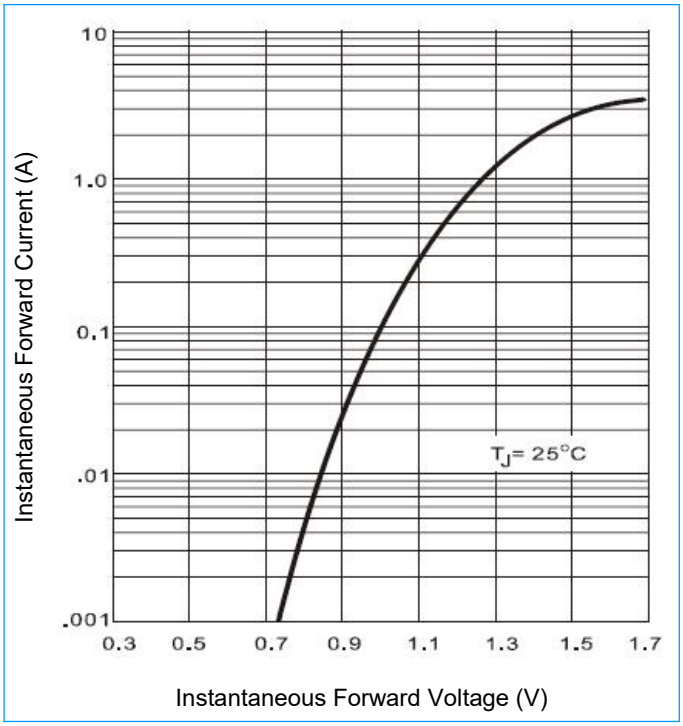
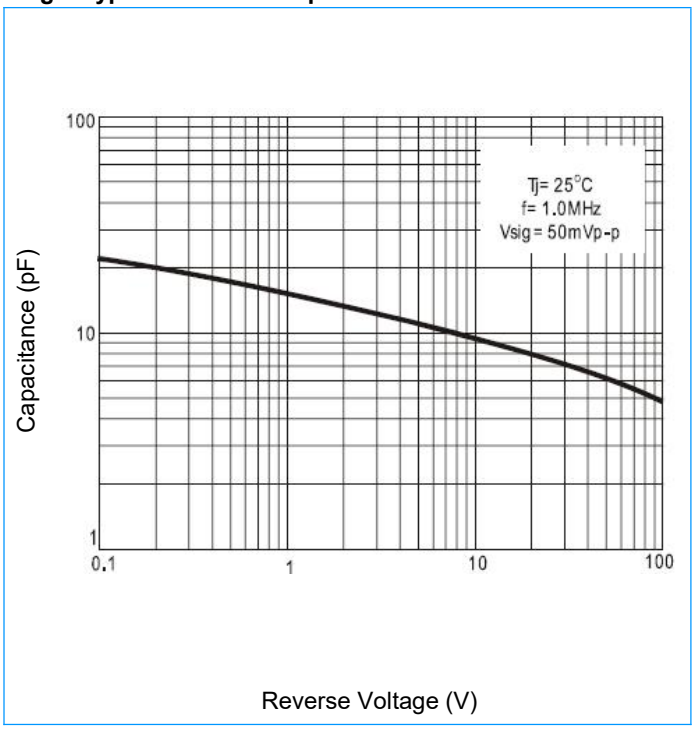


Fig4. Typical Junction Capacitance

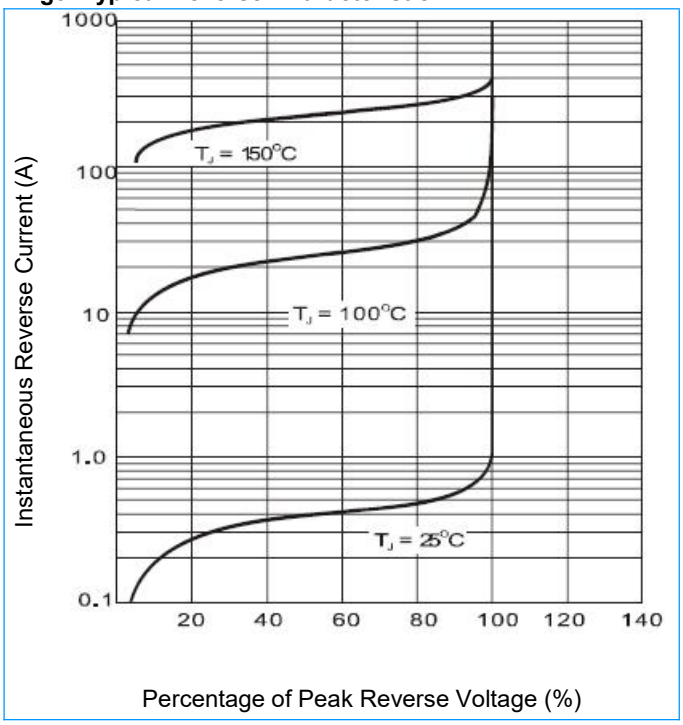


Fast Recovery Diodes

FR101~FR107 | **50 to 1000 V** | **DO-41**

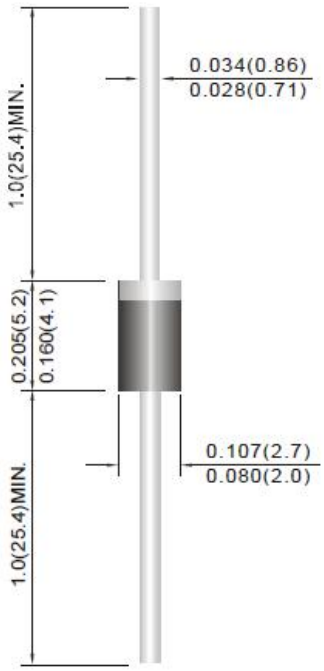
Rating and Characteristic Curves (Continue)

Fig5. Typical Reverse Characteristic



DO-41 Package Outline

DO-41



Fast Recovery Diodes

FR101~FR107 | **50 to 1000 V** | **DO-41**

Packaging Information

Part Number	Component Package	Quantity
FR101~FR107	DO-41	5000 PCS

Warning

- SOCAY owns the rights to a number of patents, trademarks, copyrights, trade secrets, and other intellectual property.
- SOCAY reserves the right to make changes without further notice to any products herein.
- SOCAY makes no warranties, representations or warranties as to the fitness of its products for any particular purpose, and disclaims any liability.
- The parameters provided in the SOCAY datasheet specification may vary from application to application, and the actual performance may vary over time. All operating parameters must be verified by the customer's technical expert before application.
- Any and all responsibilities and liabilities are disclaimed if any item under this notice of warning is not complied with.