

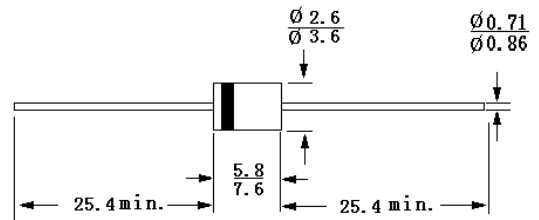
FR151 THRU FR157

FAST SWITCHING PLASTIC RECTIFIERS

Reverse Voltage – 50 to 1000 Volts

Forward Current – 1.5 Amperes

DO-15



Dimensions in mm

Features

- High current capability.
- 1.5 ampere operation at $T_A=50^{\circ}\text{C}$ with no thermal runaway.
- Low leakage.

Mechanical Data

- **Case:** Molded plastic, DO-15
- **Terminals:** Plated axial leads, solderable per MIL-STD-202, method 208
- **Polarity:** Color band denotes cathode
- **Mounting Position:** Any

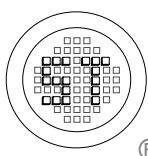
Absolute Maximum Ratings and Characteristics

Ratings 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%.

	Symbols	FR151	FR152	FR153	FR154	FR155	FR156	FR157	Units
Maximum repetitive 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_{CD}	50	100	200	400	600	800	1000	V
Maximum average forward rectified current 375"(9.5mm) lead length at $T_A = 55^{\circ}\text{C}$	$I_{(AV)}$	1.5							A
Peak forward surge current I_{FM} (surge) 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	50							A
Maximum forward voltage at 1.5A DC	V_F	1.3							V
Maximum reverse current $T_J = 25^{\circ}\text{C}$ at rated DC blocking voltage $T_J = 100^{\circ}\text{C}$	I_R	5 500							μA
Typical junction capacitance (Note 1)	C_J	25							pF
Typical thermal resistance (Note 3)	$R_{\theta JL}$	45							$^{\circ}\text{C/W}$
Maximum reverse recovery time (Note 2)	T_{rr}	150	150	150	150	250	500	500	ns
Operating and storage temperature range	T_J, T_S	-55 to +150							$^{\circ}\text{C}$

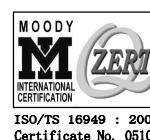
Notes:

- (1) Measured at 1MHz and applied reverse voltage of 4 VDC.
- (2) Reverse recovery test conditions: $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{rr} = 0.25\text{A}$.
- (3) Thermal resistance from junction to ambient and from junction to lead at 0.375"(9.5mm) lead length P.C.B mounted.



SEMTECH ELECTRONICS LTD.

(Subsidiary of Semtech International Holdings Limited, a company listed on the Hong Kong Stock Exchange, Stock Code: 724)



ISO/TS 16949 : 2002
Certificate No. 05103



ISO 14001
Certificate No. 7116



ISO 9001 : 2000
Certificate No. 839-100-01-002-001

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