



# FR16K05 thru FR16MR05

## Silicon Fast Recovery Diode

$V_{RRM} = 100\text{ V} - 1000\text{ V}$

$I_F = 16\text{ A}$

### Features

- High Surge Capability
- Types up to 1000 V  $V_{RRM}$

DO-4 Package



Maximum ratings, at  $T_j = 25\text{ °C}$ , unless otherwise specified ("R" devices have leads reversed)

Parameter	Symbol	Conditions	FR16K(R)05	FR16M(R)05	Unit
Repetitive peak reverse voltage	$V_{RRM}$		800	1000	V
RMS reverse voltage	$V_{RMS}$		560	700	V
DC blocking voltage	$V_{DC}$		800	1000	V
Continuous forward current	$I_F$	$T_C \leq 100\text{ °C}$	16	16	A
Surge non-repetitive forward current, Half Sine Wave	$I_{F,SM}$	$T_C = 25\text{ °C}, t_p = 8.3\text{ ms}$	225	225	A
Operating temperature	$T_j$		-65 to 150	-65 to 150	°C
Storage temperature	$T_{stg}$		-65 to 175	-65 to 175	°C

Electrical characteristics, at  $T_j = 25\text{ °C}$ , unless otherwise specified

Parameter	Symbol	Conditions	FR16K(R)05	FR16M(R)05	Unit
Diode forward voltage	$V_F$	$I_F = 16\text{ A}, T_j = 25\text{ °C}$	1.4	1.4	V
Reverse current	$I_R$	$V_R = 100\text{ V}, T_j = 25\text{ °C}$	25	25	$\mu\text{A}$
		$V_R = 100\text{ V}, T_j = 150\text{ °C}$	6	6	mA

### Recovery Time

Maximum reverse recovery time	$T_{RR}$	$I_F = 0.5\text{ A}, I_R = 1.0\text{ A}, I_{RR} = 0.25\text{ A}$	500	500	nS
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### Thermal characteristics

Thermal resistance, junction - case	$R_{thJC}$		1.5	1.5	°C/W
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Figure .1-Typical Forward Characteristics

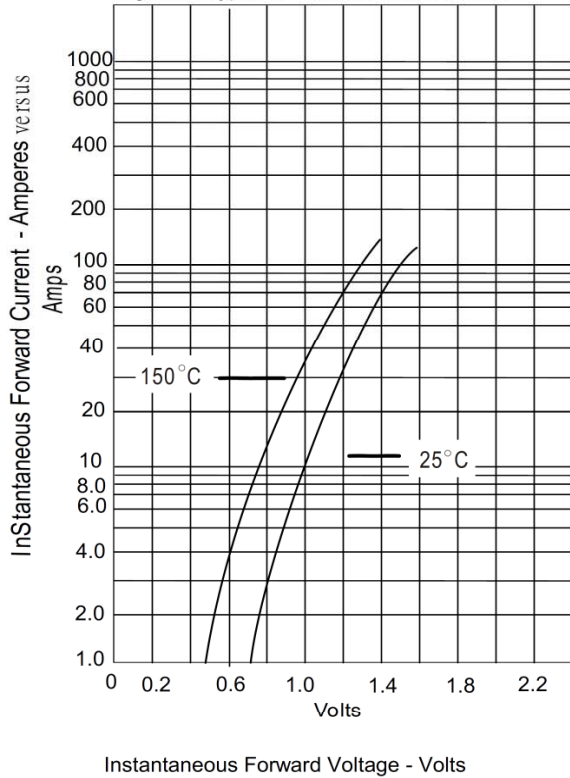


Figure .2-Forward Derating Curve

