



America Semiconductor

Silicon Fast Recovery Diode

FR6J05 thru FR6MR05

$V_{RRM} = 50\text{ V} - 1000\text{ V}$

$I_F = 6\text{ A}$

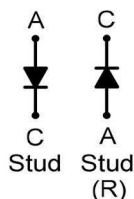
Features

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

DO-4 Package

Note:

1. Standard polarity: Stud is cathode.
2. Reverse polarity (R): Stud is anode.
3. Stud is base.



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

Parameter	Symbol	Conditions	FR6J(R)05	FR6K(R)05	FR6M(R)05	Unit
Repetitive peak reverse voltage	V_{RRM}		600	800	1000	V
RMS reverse voltage	V_{RMS}		420	560	700	V
DC blocking voltage	V_{DC}		600	800	1000	V
Continuous forward current	I_F	$T_C \leq 100\text{ °C}$	6	6	6	A
Surge non-repetitive forward current, Half Sine Wave	$I_{F,SM}$	$T_C = 25\text{ °C}$, $t_p = 8.3\text{ ms}$	135	135	135	A
Operating temperature	T_j		-65 to 150	-65 to 150	-65 to 150	°C
Storage temperature	T_{stg}		-65 to 175	-65 to 175	-65 to 175	°C

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

Parameter	Symbol	Conditions	FR6J(R)05	FR6K(R)05	FR6M(R)05	Unit
Diode forward voltage	V _F	I _F = 6 A, T _j = 25 °C	1.4	1.4	1.4	V
Reverse current	I _R	V _R = 50 V, T _j = 25 °C	25	25	25	μA
		V _R = 50 V, T _j = 150 °C	6	6	6	mA
Recovery Time						
Maximum reverse recovery time	T _{RR}	I _F =0.5 A, I _R =1.0 A, I _{RR} = 0.25 A	500	500	500	nS
Thermal characteristics						
Thermal resistance, junction - case	R _{thJC}		2.5	2.5	2.5	°C/W



