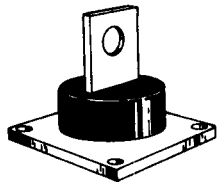
MR1265FL, MR1269FL (SILICON)



CASE 136

Silicon power rectifiers designed with double-case, multi-cell construction for extreme reliability and ruggedness. Standard cathode-to-case polarity, but available with reverse polarity by adding suffix "R" to type number.

MAXIMUM RATINGS

Rating	Symbol	MR1265	MR1269	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	300	600	Volts
Non-Repetitive Peak Reverse Voltage (one half-wave, single phase, 60 cycle peak)	V_{RSM}	400	720	Volts
RMS Reverse Voltage	$V_{R(RMS)}$	210	420	Volts
Average Rectified Forward Current (single phase, resistive load, 60 Hz, T_C = 150°C)	I_O	650		Amperes
Non-Repetitive Peak Surge Currents (superimposed on rated current at rated voltage, T_C = 150°C)	I_{FSM}	12,000 (for 1/2 cycle) 8,000 (for six consecutive 1/2 cycles)		Amperes
I^2t Rating (non-repetitive, for t greater than 1 ms and less than 8.3 ms)	I^2t	300,000		A^2s
Operating and Storage Junction Temperature Range	T_J, T_{stg}	-65 to +190		°C

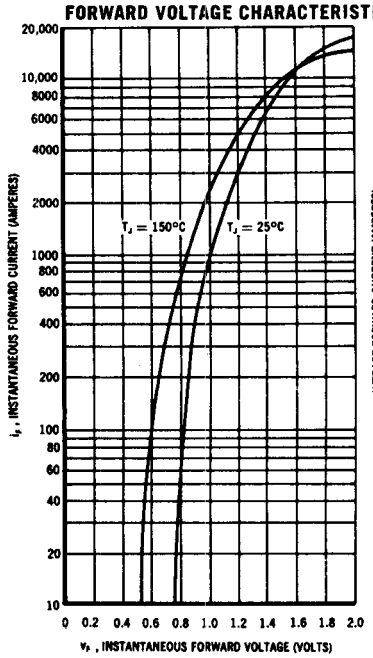
THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Thermal Resistance, Junction to Case	$R_{\theta JC}$	0.045	°C/Watt

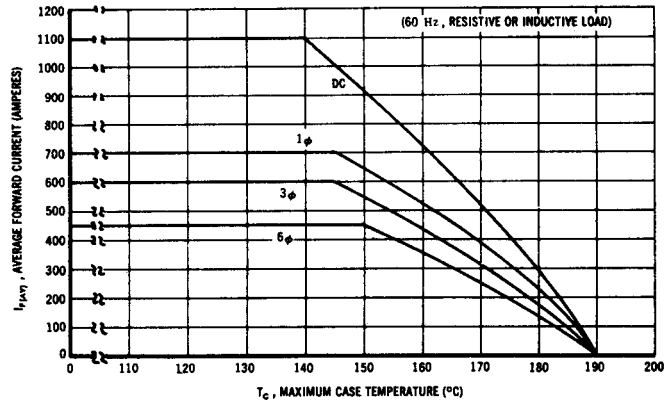
ELECTRICAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Full Cycle Average Forward Voltage Drop (rated I_O and $V_{R(RMS)}$, single phase, 60 Hz, T_C = 150°C)	$V_{F(AV)}$	0.4	Volts
Full Cycle Average Reverse Current (rated I_O and $V_{R(RMS)}$, single phase, 60 Hz, T_C = 150°C)	$I_{R(AV)}$	100	mA

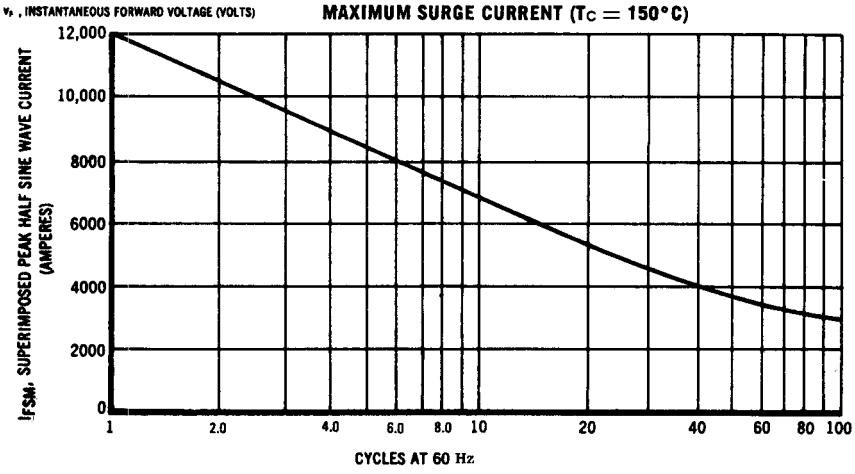
FORWARD VOLTAGE CHARACTERISTICS



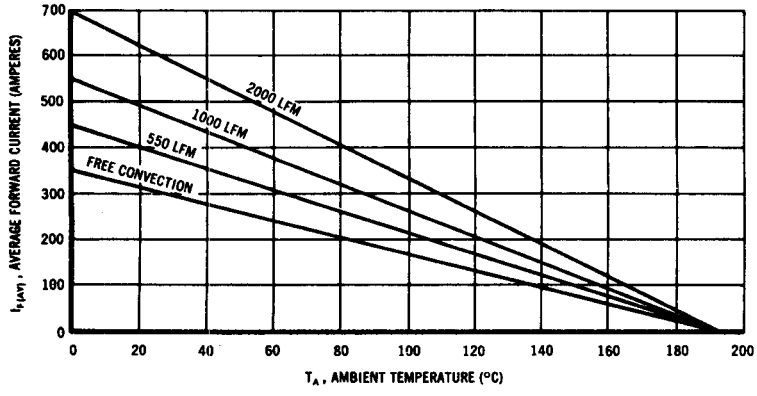
MAXIMUM FORWARD CURRENT versus MAXIMUM CASE TEMPERATURE



MAXIMUM SURGE CURRENT ($T_C = 150°C$)



MAXIMUM SINGLE-PHASE CURRENT RATING



CONDITIONS

10 x 10 x ¼ copper heat sink fin $\epsilon \geqq 0.9$ and mounted parallel to air flow, 180° conduction.

For 3 phase ratings multiply current scale by 0.85.

For 6 phase ratings multiply current scale by 0.60.