T-03-17

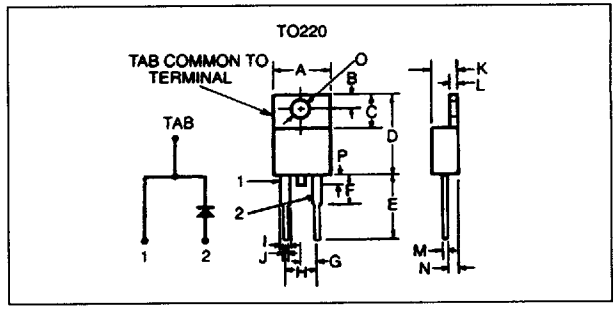
MICRO QUALITY
SEMICONDUCTOR, INC.

10 Amp Epitaxial High Efficiency Rectifiers

300 To 600 Volt V_{RRM}
Low Thermal Resistance
Low Leakage
High Surge Capability
Ultra Fast Switching Speeds
Glass Passivated

LTR.	INCHES	MILLIMETERS
A	0.415 Max	10,54 Max
B	.108	2,74
C	.248	6,3
D	0.605 Max	15,37 Max
E	0.552	14,02
F	0.240 Max	6,1 Max
G	0.100	2,54
H	0.200	5,08
I	0.050	1,27
J	0.032	0,81
K	.190 Max	4,83 Max
L	0.050	1,27
M	0.022	0,56
N	0.105	2,67
O	0.143	3,63
P	0.130 Max	3,30 Max

Inch tolerances ± .005



MAXIMUM RATINGS (T_J = 25°C unless otherwise noted)

RATINGS	SYMBOL	VHE1405	VHE1406	VHE1407	VHE1408	UNITS
DC Blocking Voltage Working Peak Reverse Voltage Peak Repetitive Reverse Voltage	V_{RM} V_{RWM} V_{RRM}	300	400	500	600	Volts
RMS Reverse Voltage	$V_{R(RMS)}$	210	280	350	420	Volts
Average Rectified Forward Current @ T_C = 100°C	I_o	10.0				Amps
Peak Surge Current (non-rep), ½ cycle, 60 Hz	I_{FSM}	150.0				Amps
Thermal Resistance, Junction to Case	$R_{\theta JC}$	2.25				°C/Watt
Operating and Storage Temperature Range	T_J, T_{STG}	− 65 to + 150				°C

ELECTRICAL CHARACTERISTICS (T_J = 25°C unless otherwise noted)

CHARACTERISTICS	SYMBOL	VHE1405	VHE1406	VHE1407	VHE1408	UNITS
Maximum Instantaneous Forward Voltage Drop I_F = 5A I_F = 10A I_F = 20A	V_{FM}	T_J = 25°C 1.40 1.65 1.95		T_J = 100°C 1.15 1.40 1.75		Volts
Maximum Reverse Current at Rated V_{RM} T_J = 25°C T_J = 100°C T_J = 150°C	I_{RM}	10.0 200.0 500.0				µAmps
Maximum Reverse Recovery Time I_F = 0.5A, I_R = 1A, I_{RR} = 0.25A	t_{rr}	50				nsec.
Typical Junction Capacitance, V_R = 10V.	C_J	35				pF

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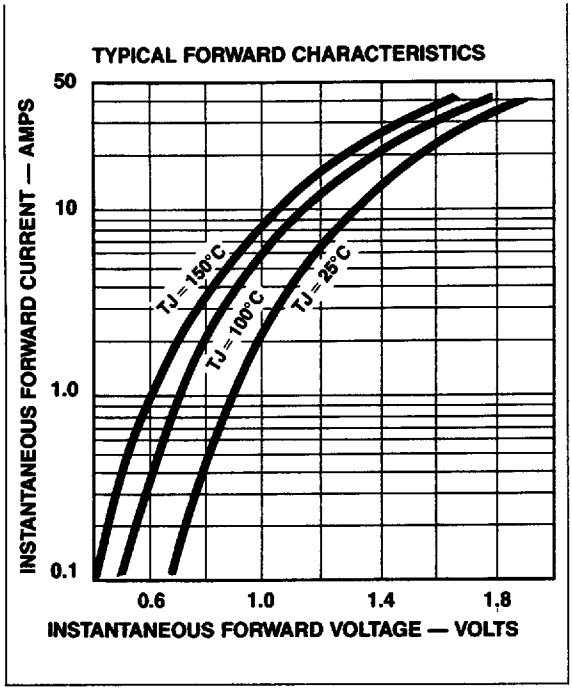

FIGURE 1

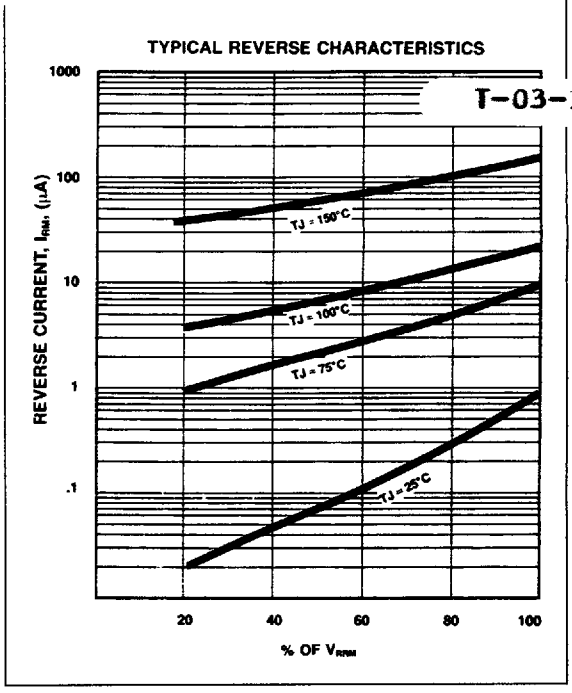

FIGURE 2

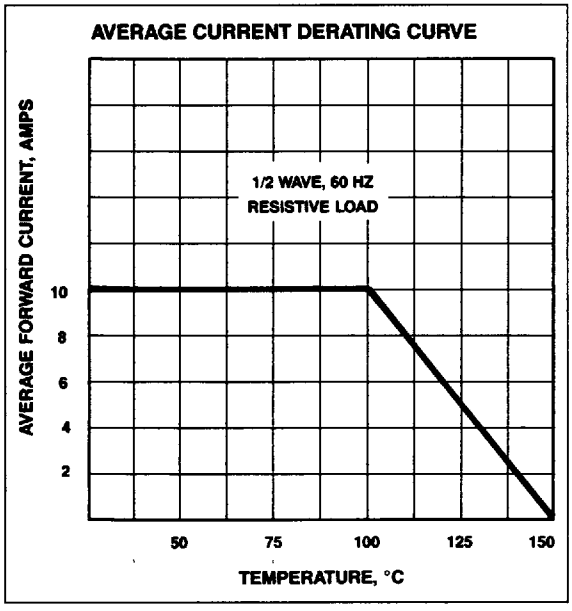

FIGURE 3

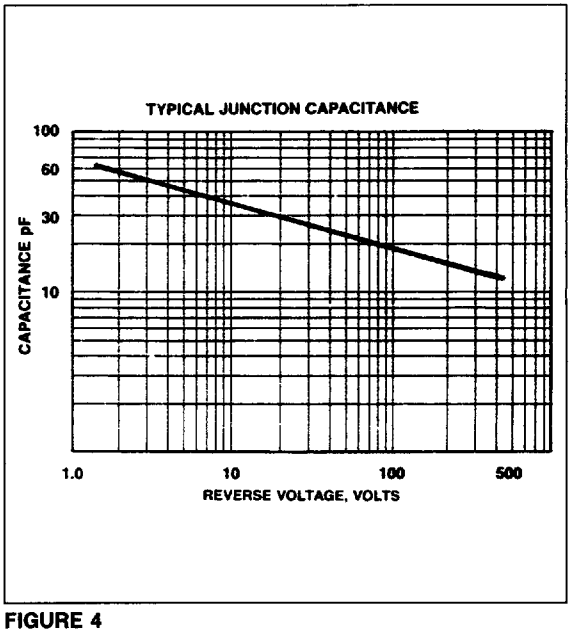

FIGURE 4