SCHEMATICS

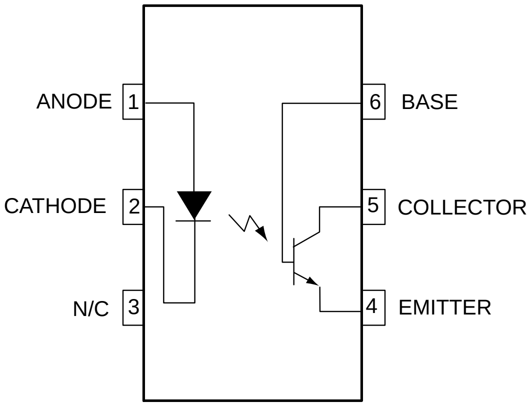


Figure 1. Schematics

SAFETY AND INSULATION RATINGS

Parameter		Characteristic
Installation Classifications per DIN VDE 0110/1.89 Table 1, For Rated Mains Voltage	< 150 V_{RMS}	I – IV
	< 300 V_{RMS}	I – IV
Climatic Classification		55/100/21
Pollution Degree (DIN VDE 0110/1.89)		2
Comparative Tracking Index		175

Symbol	Parameter	Value	Unit
V_{PR}	Input−to−Output Test Voltage, Method A, V_{IORM} x 1.6 = V_{PR}, Type and Sample Test with t_m = 10 s, Partial Discharge < 5 pC	1360	V_{peak}
	Input−to−Output Test Voltage, Method B, V_{IORM} x 1.875 = V_{PR}, 100% Production Test with t_m = 1 s, Partial Discharge < 5 pC	1594	V_{peak}
V_{IORM}	Maximum Working Insulation Voltage	850	V_{peak}
V_{IOTM}	Highest Allowable Over−Voltage	6000	V_{peak}
	External Creepage	≥ 7	mm
	External Clearance	≥ 7	mm
	External Clearance (for Option TV, 0.4” Lead Spacing)	≥ 10	mm
DTI			

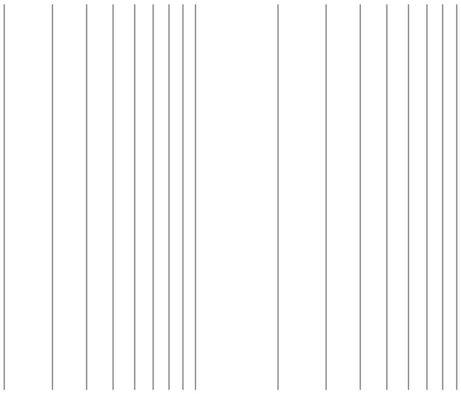
ABSOLUTE MAXIUM RATINGS

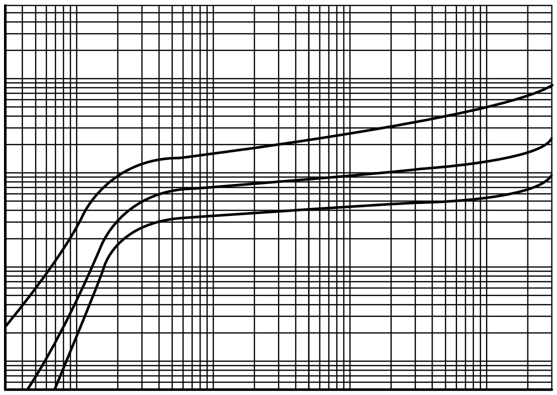
Symbol	Parameter	Device	Value	Unit
TOTAL DEVICE				
T_{STG}	Storage Temperature	All	–40 to + 125	°C
T_{OPR}	Operating Temperature	All	–40 to + 100	°C
T_J	Junction Temperature	All	–40 to + 125	°C
T_{SOL}	Lead Solder Temperature	All	260 for 10 seconds	°C
P_D	Total Device Power Dissipation @ T_A = 25°C	All	420	mW
	Derate Above 25°C		3.5	mW/°C
EMITTER				
I_F	Forward DC Current (Note 2)	All	80	mA
V_R	Reverse Input Voltage (Note 2)	All	6.0	V
I_F(pk)	Forward Current – Peak (1 μs pulse, 300 pps) (Note 2)	All	3.0	A
P_D	LED Power Dissipation @ T_A = 25°C (Note 2)	All	120	mW
	Derate Above 25°C		1.41	mW/°C
DETECTOR				
P_D	Power Dissipation @ TA = 25°C	All	300	mW
	Derate Linearly Above 25°C		4.0	mW/°C
V_{CEO}	Collector to Emitter Voltage (Note 2)	MOC8204M	400	V
		H11D1M	300	V
		H11D3M	200	V
		4N38M	80	V
V_{CBO}	Collector Base Voltage (Note 2)	MOC8204M	400	V
		H11D1M	300	V
		H11D3M	200	V
		4N38M	80	V
V_{ECO}	Emitter to Collector Voltage (Note 2)	H11D1M, H11D3M, MOC8204M	7	V
I_C	Collector Current (Continuous)	All	100	mA

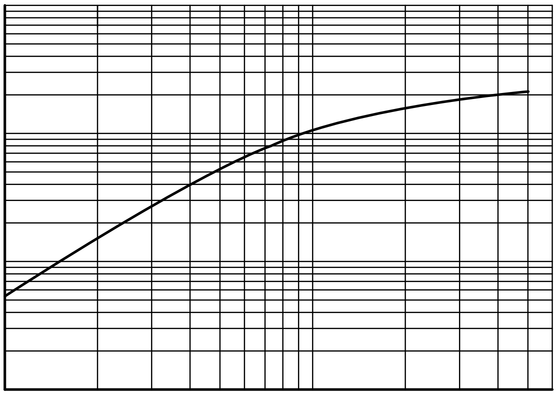
Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

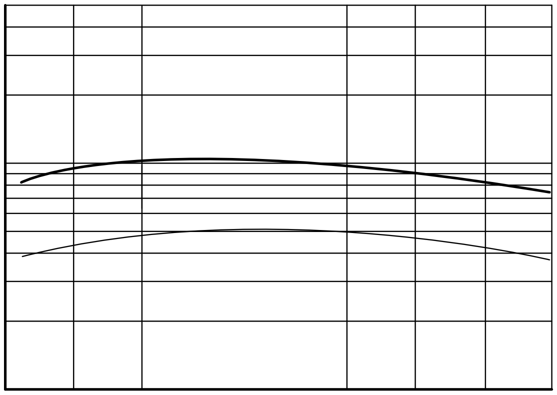
2. Parameters meet or exceed JEDEC registered data (for 4N38M only).

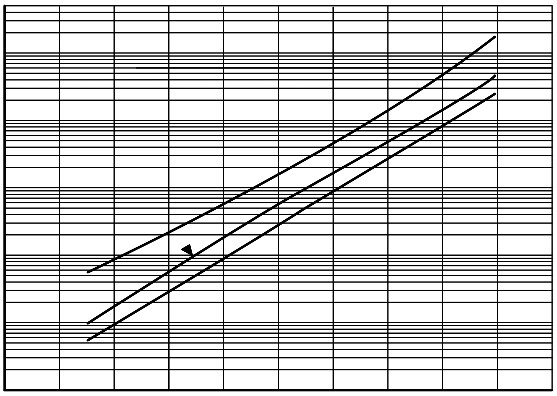
TYPICAL PERFORMANCE CURVES

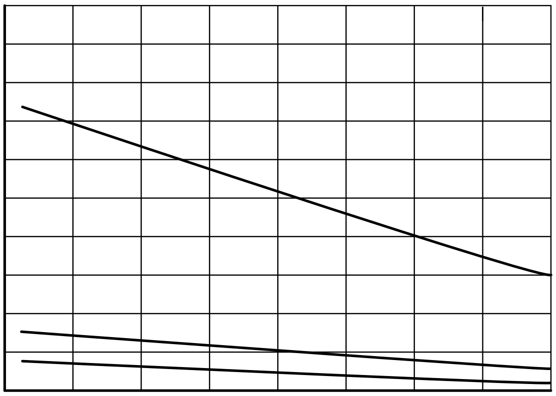












REFLOW PROFILE

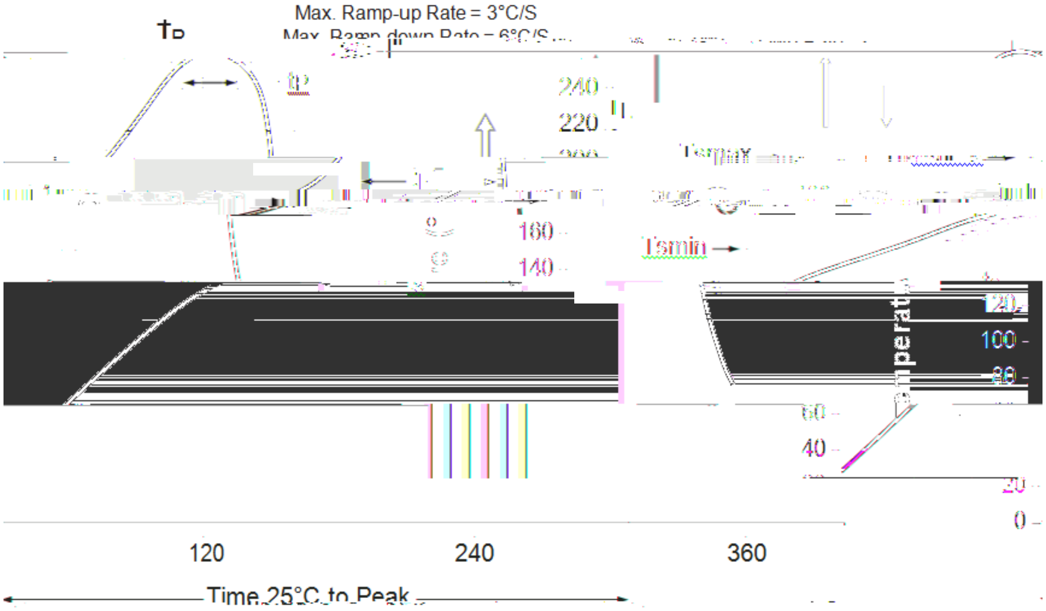
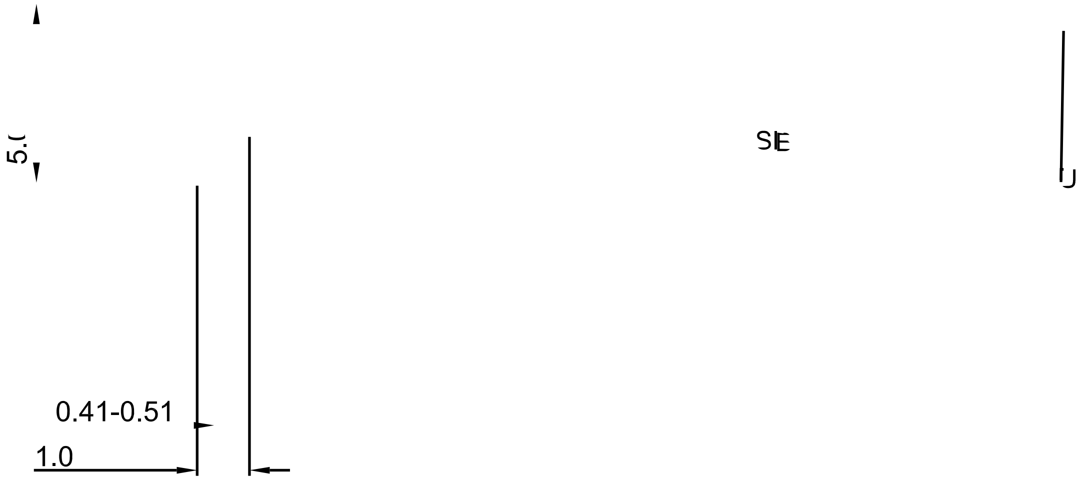


Figure 8. Reflow Profile

Profile Feature	Pb–Free Assembly Profile
Temperature Min. (Tsmin)	150°C
Temperature Max. (Tsmax)	200°C
Time (t_S) from (Tsmin to Tsmax)	60 – 120 seconds

Ramp–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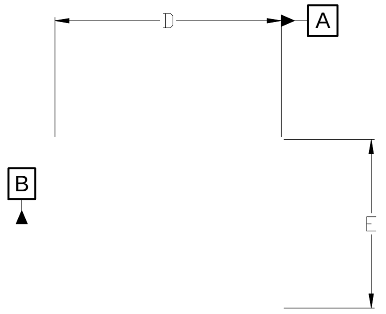

TOP VIEW

ALL DIMENSIONS ARE IN MILLIMETERS.

C) DIM