

4N38M, H11D1M, H11D3M, MOC8204M

SCHEMATICS

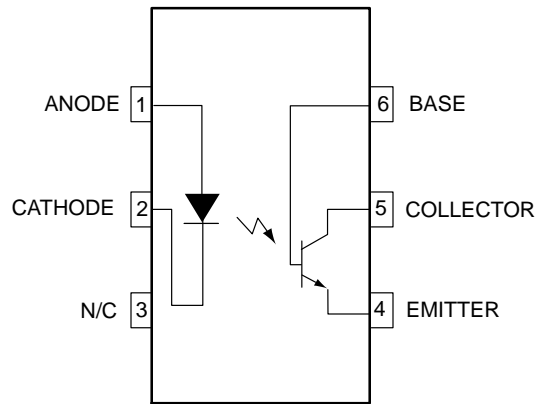


Figure 1. Schematics

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			

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ABSOLUTE MAXIMUM RATINGS

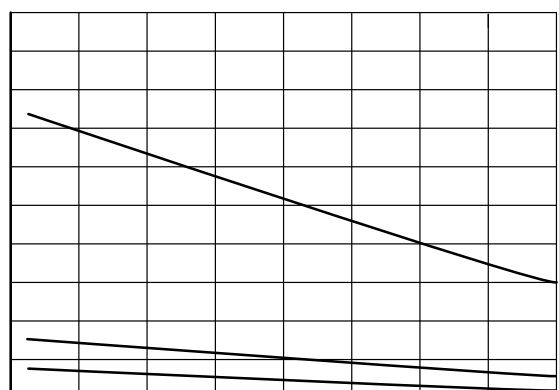
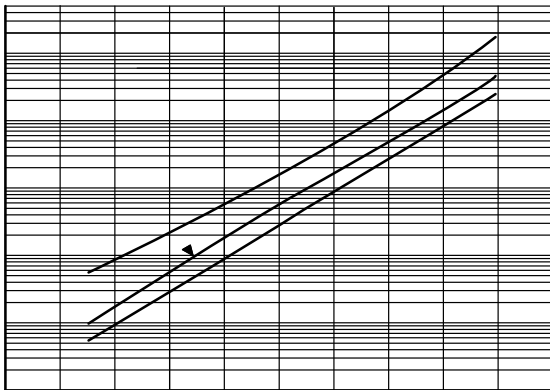
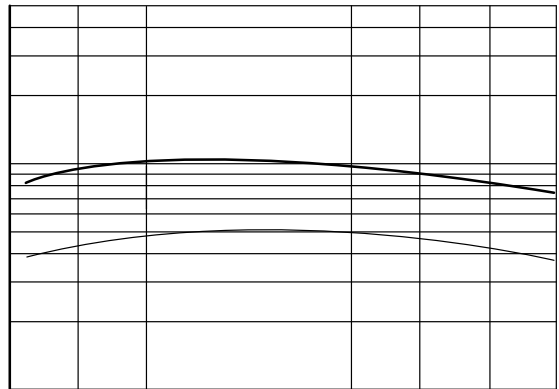
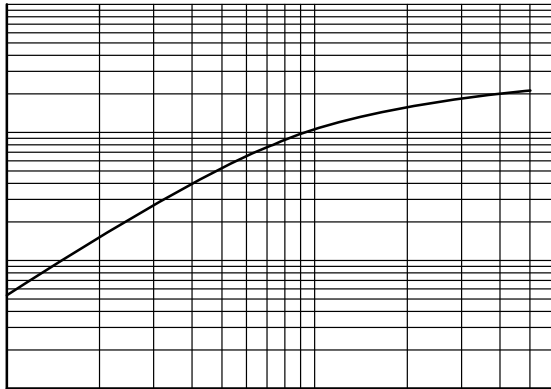
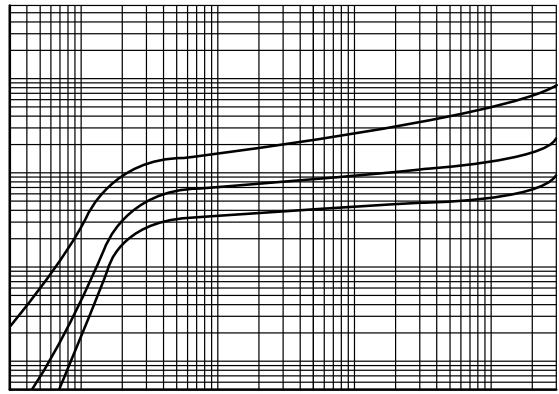
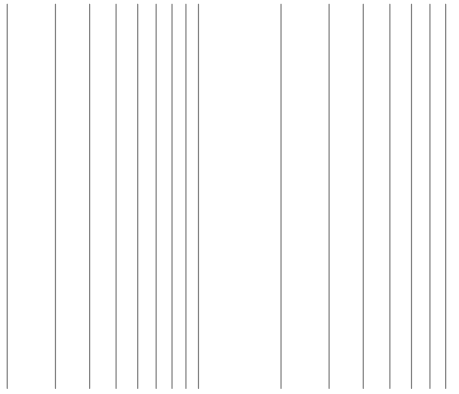
Symbol	Parameter	Device	Value	Unit
TOTAL DEVICE				
T _{STG}	Storage Temperature	All	-40 to + 125	°C
T _{OPR}	Operating Temperature	All	-40 to + 100	°C
T _J	Junction Temperature	All	-40 to + 125	°C
T _{SOL}	Lead Solder Temperature	All	260 for 10 seconds	°C
P _D	Total Device Power Dissipation @ T _A = 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 @ T _A = 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).

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TYPICAL PERFORMANCE CURVES



REFLOW PROFILE

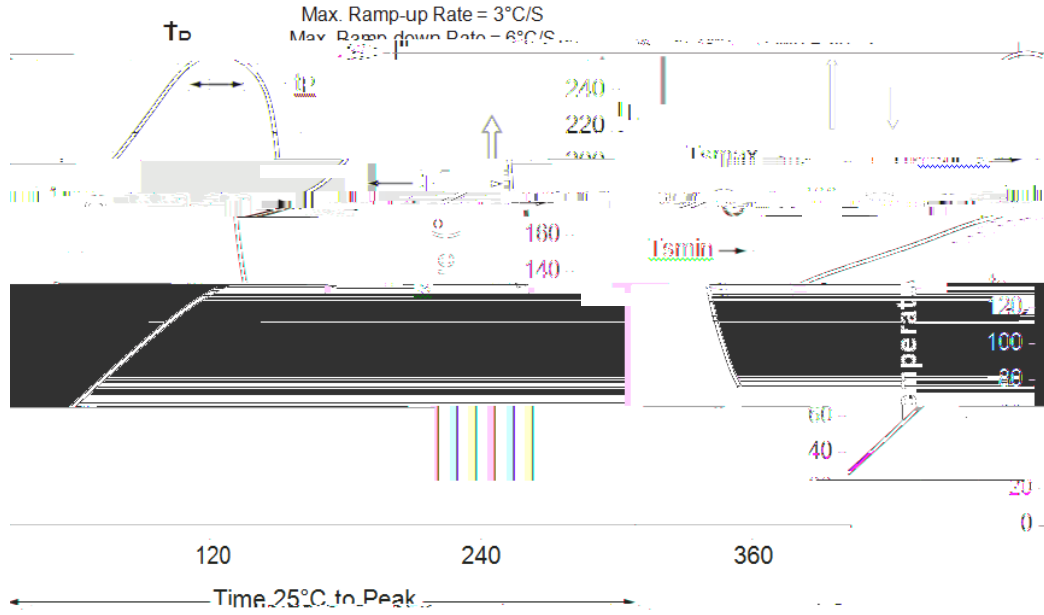
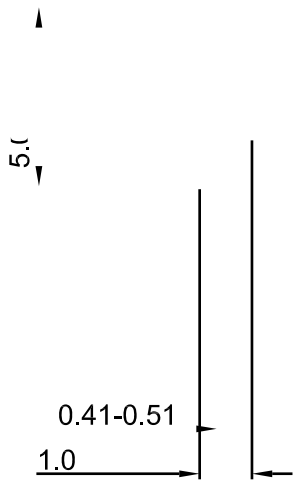


Figure 8. Reflow Profile

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

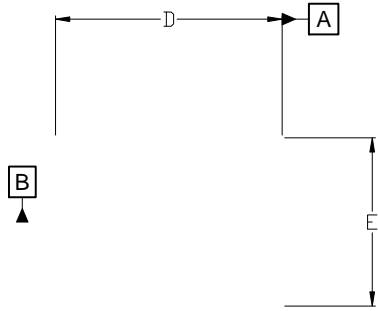


SE

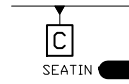


PDIP6 8.51x6.35, 2.54P
CASE 646BY
ISSUE A

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TOP VIEW



ALL DIMENSIONS ARE IN MILLIMETERS.
C) DIM ■

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