ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise specified)

INPUT

Parameter	Symbol	Test Condition	Min	Typ.	Max	Unit
Forward Voltage	V_F	I_F = 20mA		1.2	1.5	V
Reverse Current	I_R	V_R = 6V		0.05	10	µA

OUTPUT

Parameter	Symbol	Test Condition	Min	Typ.	Max	Unit
Peak Off-state Current Either Direction	I_{DRM}	V_{DRM} = 600V I_F = 0mA Note 1			100	nA
On-State Voltage Either Direction	V_{TM}	I_{TM} = 100mA (peak)			3.0	V
Critical Rate of Rise of Off-State Voltage	dv/dt	I_F = 0mA	1000			V/µs

COUPLED

Parameter	Symbol	Test Condition	Min	Typ.	Max	Unit
Input Trigger Current Either Direction	I_{FT}	V_{TM} = 3V Note 2 MOC3051 MOC3052			 15 10	mA
Holding Current Either Direction	I_H			200		µA

ISOLATION

Parameter	Symbol	Test Condition	Min	Typ.	Max	Unit
Insulation Voltage	V_{ISO}	AC 1 minute, RH 40 to 60% Note 3	5000			V_{RMS}

Note 1 : Test Voltage must be applied within static dv/dt rating.

Note 2 : Guaranteed to trigger at an I_F value less than or equal to max I_{FT}, recommended I_F lies between Rated I_{FT} to Absolute Max I_F.

Note 3 : Measured with input leads shorted together and output leads shorted together.

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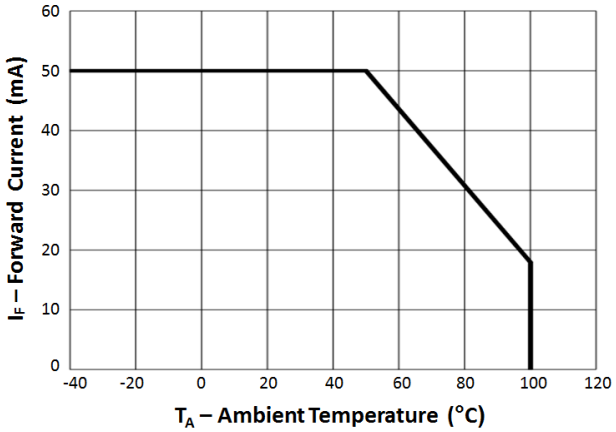

Fig 1 Forward Current vs Ambient Temperature

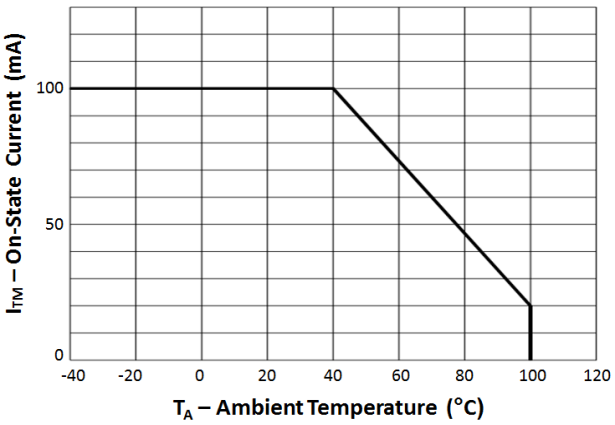

Fig 2 On-State Current vs Ambient Temperature

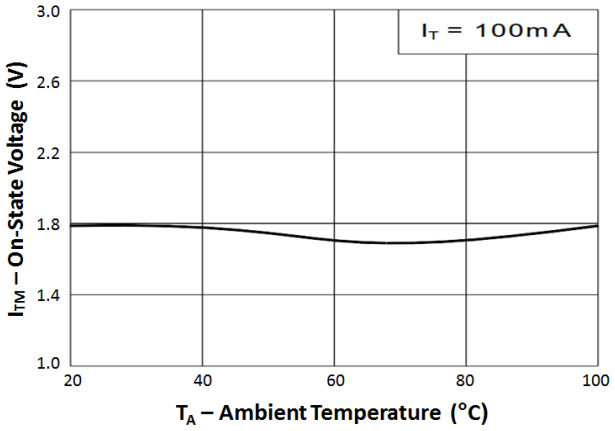

Fig 3 On-State Voltage vs Ambient Temperature

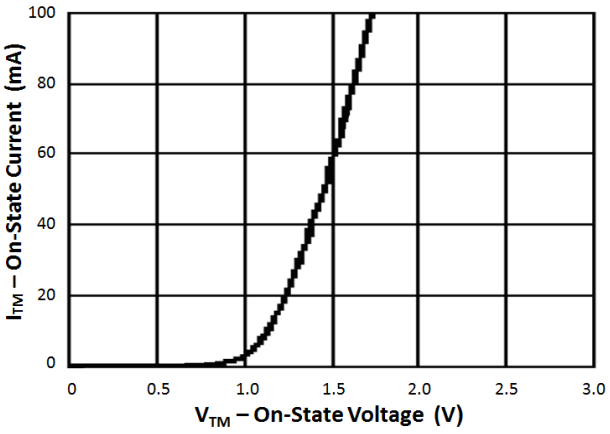

Fig 4 On-State Current vs On-State Voltage

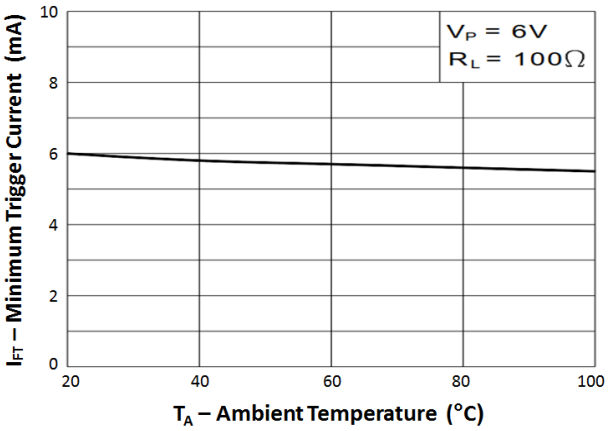

Fig 5 Minimum Trigger Current vs Ambient Temperature

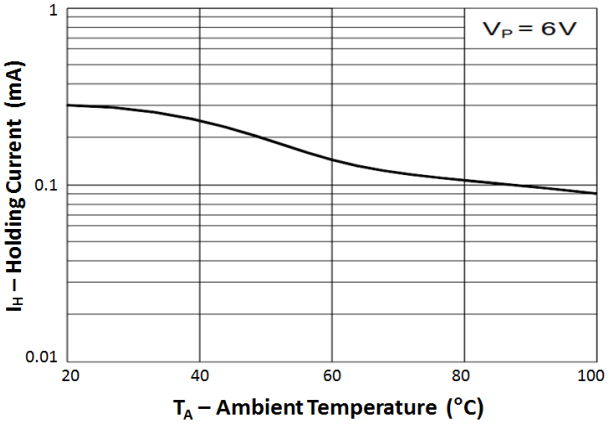

Fig 6 Holding Current vs Ambient Temperature

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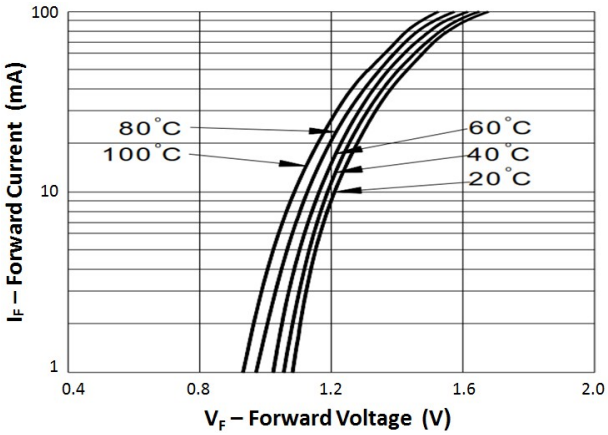

Fig 7 Forward Current vs Forward Voltage

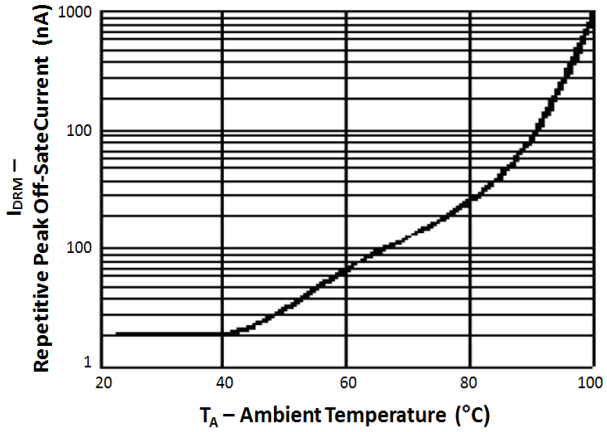

Fig 8 Repetitive Peak Off-State Current vs Ambient Temperature

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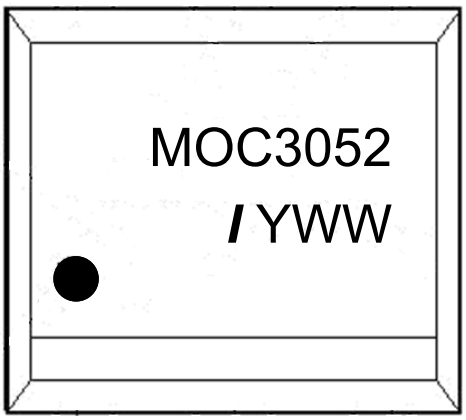
ORDER INFORMATION

MOC3051 / MOC3052 (UL Approval)			
After PN	**PN**	**Description**	**Packing quantity**
None	MOC3051, MOC3052	Standard DIP6	65 pcs per tube
G	MOC3051G, MOC3052G	10mm Lead Spacing	65 pcs per tube
SM	MOC3051SM, MOC3052SM	Surface Mount	65 pcs per tube
SMT&R	MOC3051SMT&R, MOC3052SMT&R	Surface Mount Tape & Reel	1000 pcs per reel

MOC3051X / MOC3052X (UL Approval and VDE Approvals)			
After PN	**PN**	**Description**	**Packing quantity**
None	MOC3051X, MOC3052X	Standard DIP6	65 pcs per tube
G	MOC3051XG, MOC3052XG	10mm Lead Spacing	65 pcs per tube
SM	MOC3051XSM, MOC3052XSM	Surface Mount	65 pcs per tube
SMT&R	MOC3051XSMT&R, MOC3052XSMT&R	Surface Mount Tape & Reel	1000 pcs per reel

DEVICE MARKING

Example : MOC3052



MOC3052	denotes Device Part Number
/	denotes Isocom
Y	denotes 1 digit Year code
WW	denotes 2 digit Week code

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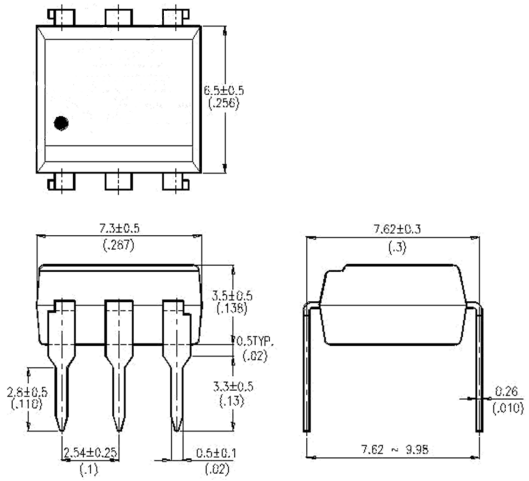
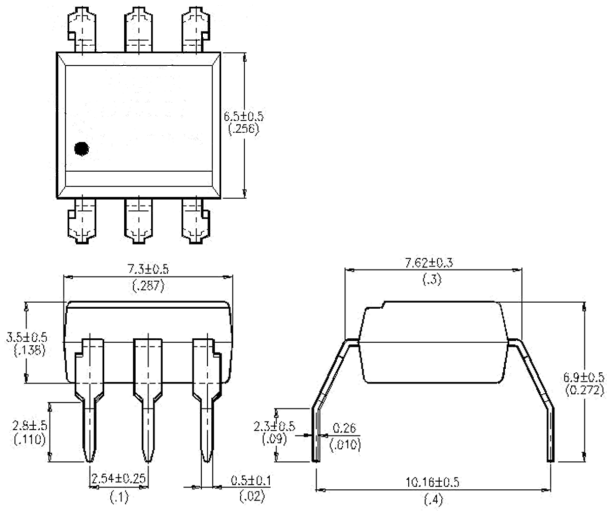
PACKAGE DIMENSIONS in mm (inch)

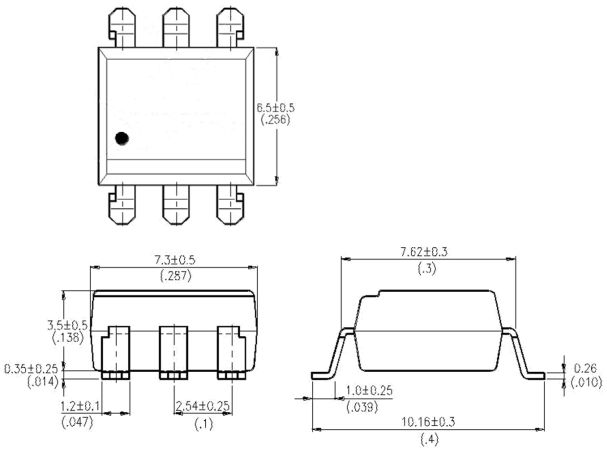
DIP



G Form



SMD



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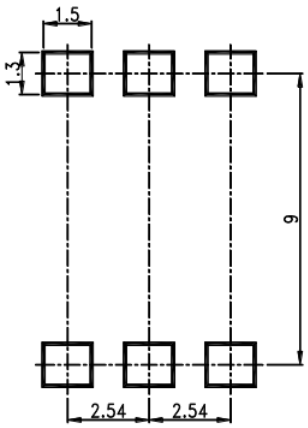
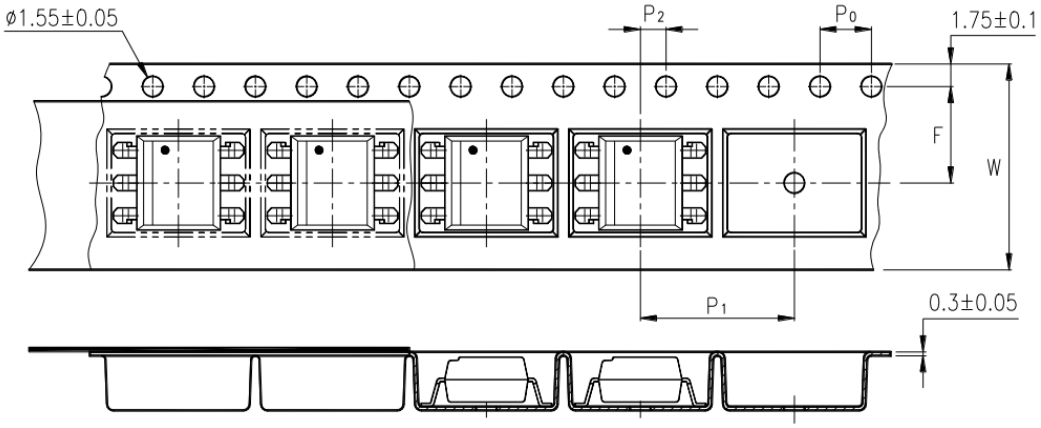
RECOMMENDED PAD LAYOUT FOR SMD (mm)



TAPE AND REEL PACKAGING



Description	Symbol	Dimension mm (inch)
Tape Width	W	16 ± 0.3 (0.63)
Pitch of Sprocket Holes	P_0	4 ± 0.1 (0.15)
Distance of Compartment to Sprocket Holes	F	7.5 ± 0.1 (0.295)
	P_2	2 ± 0.1 (0.079)
Distance of Compartment to Compartment	P_1	12 ± 0.1 (0.472)

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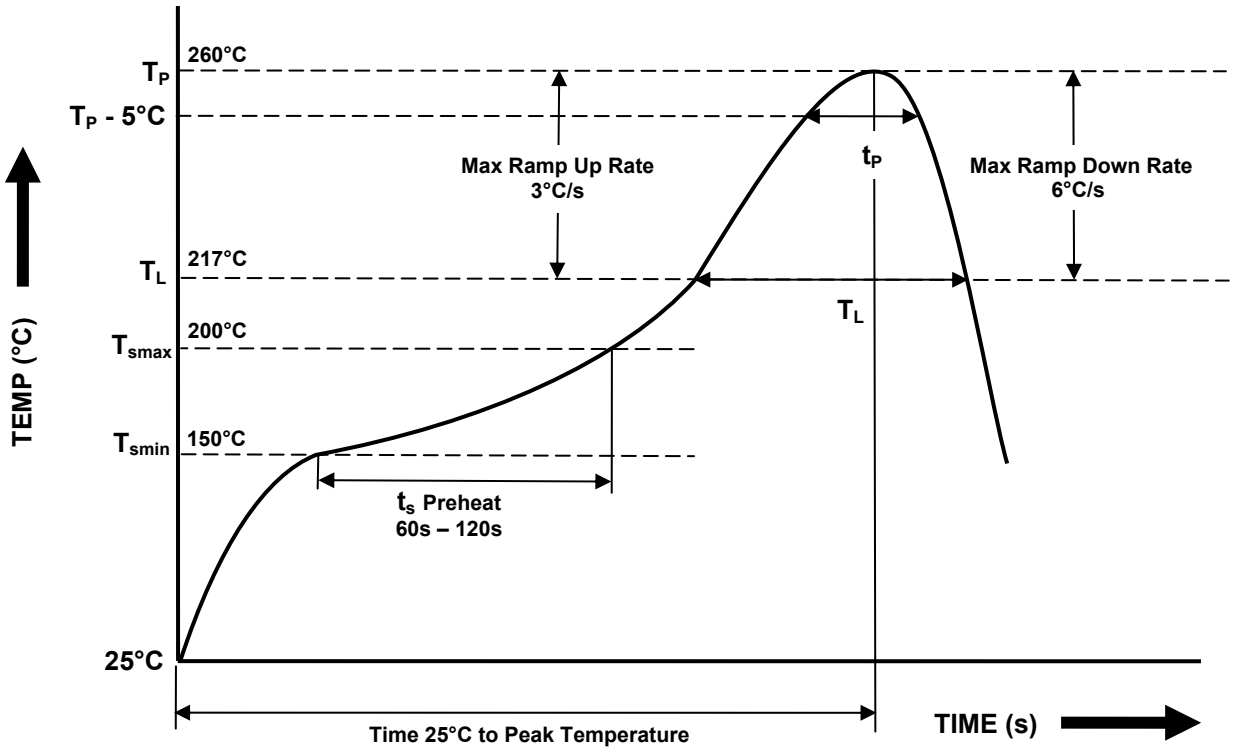
IR REFLOW SOLDERING TEMPERATURE PROFILE

Note : One Time Reflow Soldering is Recommended.
Do Not Immerse Device Body in Solder Paste.



Profile Details	Conditions
Preheat - Min Temperature (T_{SMIN}) - Max Temperature (T_{SMAX}) - Time T_{SMIN} to T_{SMAX} (t_s)	 150°C 200°C 60s - 120s
Soldering Zone - Peak Temperature (T_P) - Time at Peak Temperature - Liquidous Temperature (T_L) - Time within 5°C of Actual Peak Temperature (T_P – 5°C) - Time maintained above T_L (t_L) - Ramp Up Rate (T_L to T_P) - Ramp Down Rate (T_P to T_L)	 260°C 10s max 217°C 30s max 60s - 100s 3°C/s max 6°C/s max
Average Ramp Up Rate (T_{smax} to T_P)	3°C/s max
Time 25°C to Peak Temperature	8 minutes max

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