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 IS3051 IS3052			 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.

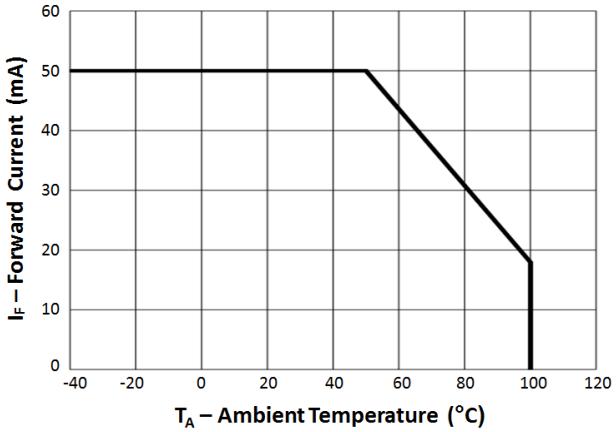


Fig 1 Forward Current vs Ambient Temperature

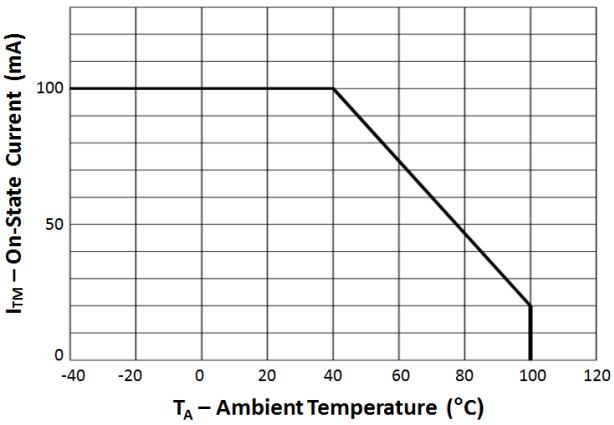


Fig 2 On-State Current vs Ambient Temperature

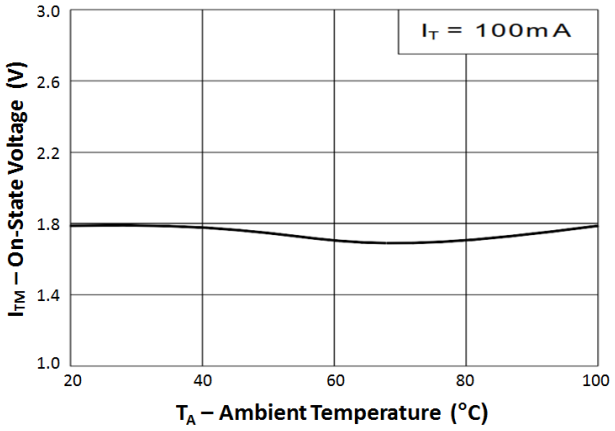


Fig 3 On-State Voltage vs Ambient Temperature

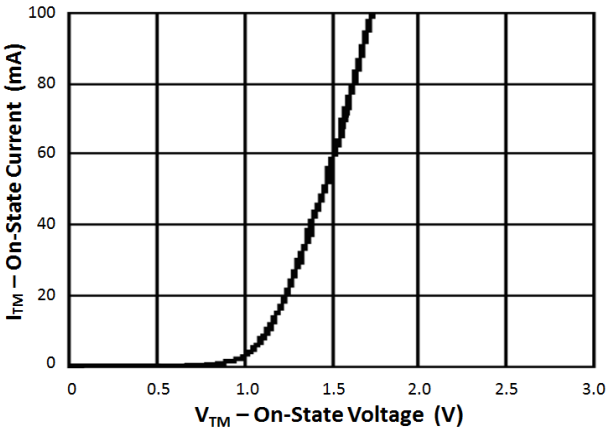


Fig 4 On-State Current vs On-State Voltage

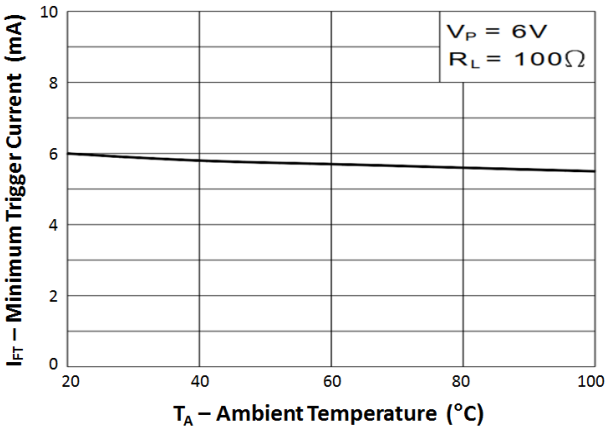


Fig 5 Minimum Trigger Current vs Ambient Temperature

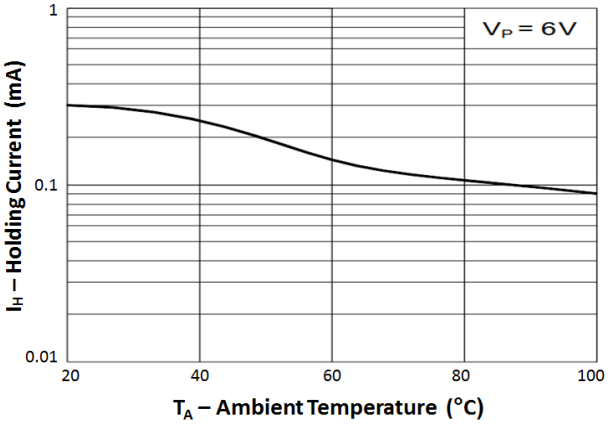


Fig 6 Holding Current vs Ambient Temperature

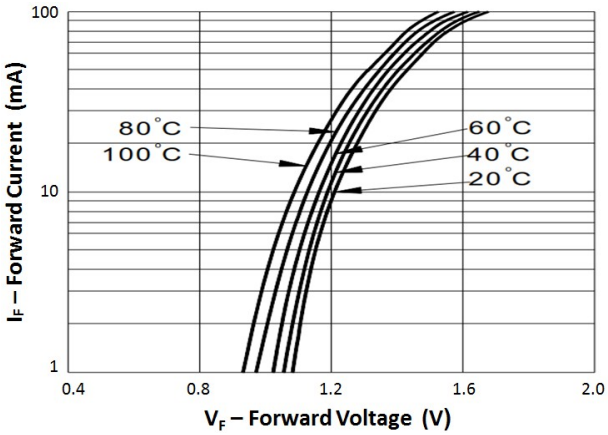


Fig 7 Forward Current vs Forward Voltage

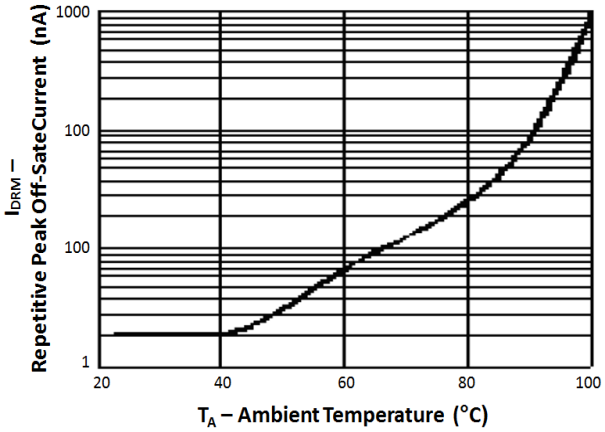


Fig 8 Repetitive Peak Off-State Current vs Ambient Temperature

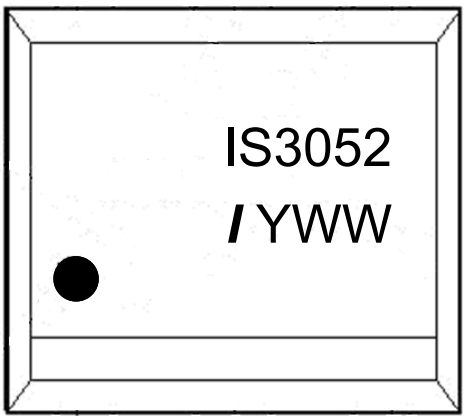
ORDER INFORMATION

IS3051 / IS3052 (UL Approval)			
After PN	**PN**	**Description**	**Packing quantity**
None	IS3051, IS3052	Standard DIP6	65 pcs per tube
G	IS3051G, IS3052G	10mm Lead Spacing	65 pcs per tube
SM	IS3051SM, IS3052SM	Surface Mount	65 pcs per tube
SMT&R	IS3051SMT&R, IS3052SMT&R	Surface Mount Tape & Reel	1000 pcs per reel

IS3051X / IS3052X (UL Approval and VDE Approvals)			
After PN	**PN**	**Description**	**Packing quantity**
None	IS3051X, IS3052X	Standard DIP6	65 pcs per tube
G	IS3051XG, IS3052XG	10mm Lead Spacing	65 pcs per tube
SM	IS3051XSM, IS3052XSM	Surface Mount	65 pcs per tube
SMT&R	IS3051XSMT&R, IS3052XSMT&R	Surface Mount Tape & Reel	1000 pcs per reel

DEVICE MARKING

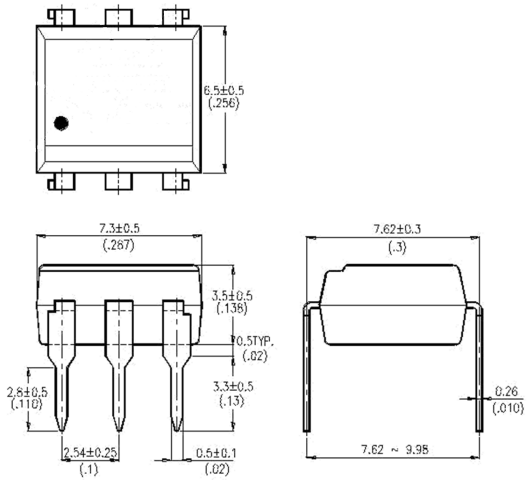
Example : IS3052



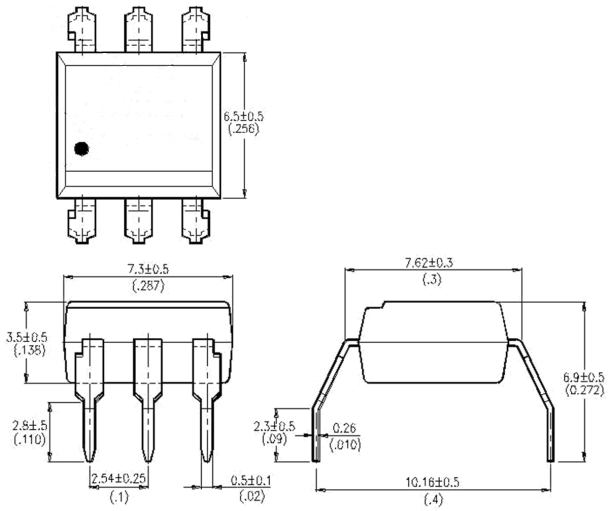
IS3052	denotes Device Part Number
I	denotes Isocom
Y	denotes 1 digit Year code
WW	denotes 2 digit Week code

PACKAGE DIMENSIONS in mm (inch)

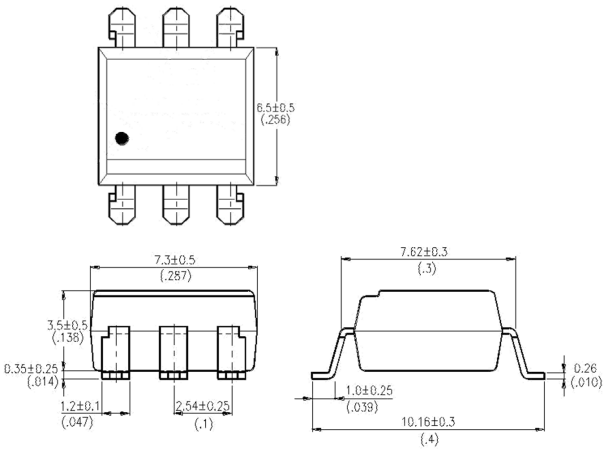
DIP



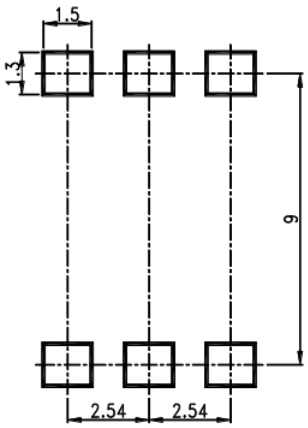
G Form



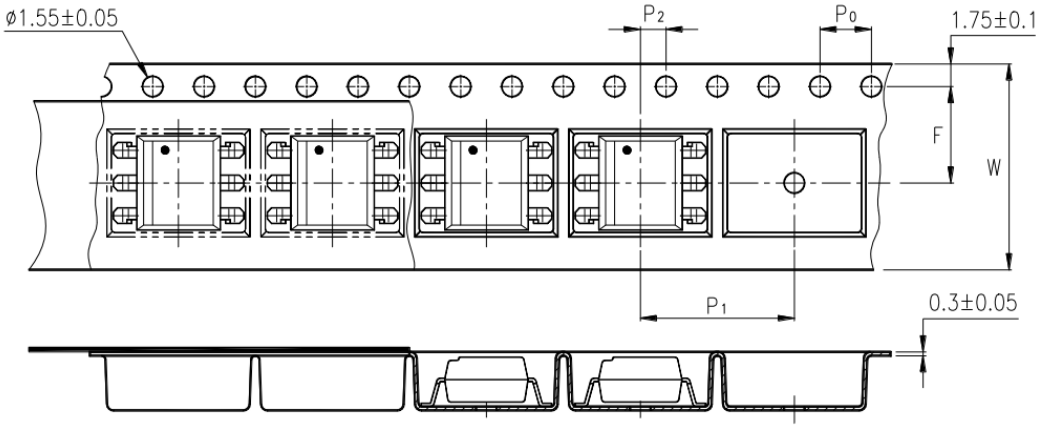
SMD



RECOMMENDED PAD LAYOUT FOR SMD (mm)



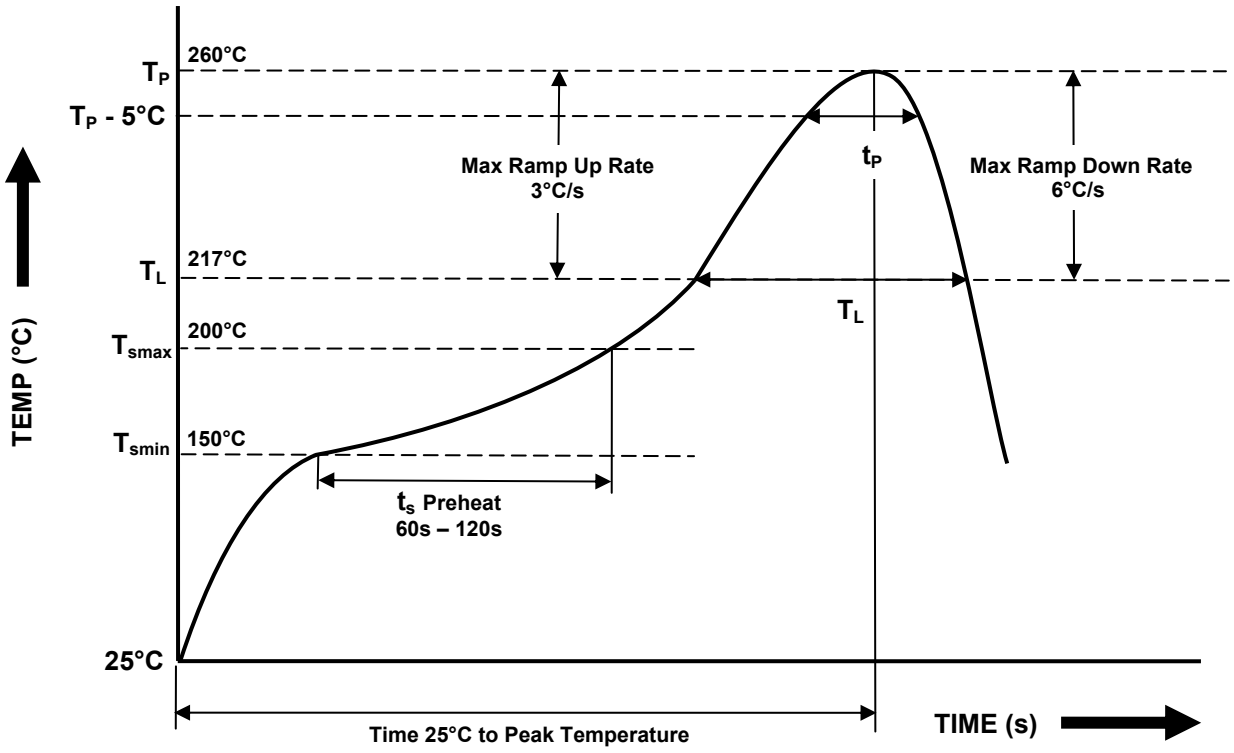
TAPE AND REEL PACKAGING



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)

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

ISOCOM COMPONENTS

DISCLAIMER

Isocom Components is continually working to improve the quality and reliability of its products. Nevertheless, semiconductor devices in general can malfunction or fail due to their inherent electrical sensitivity and vulnerability to physical stress. It is the responsibility of the buyer, when utilizing Isocom Components products, to comply with the standards of safety in making a safe design for the entire system, and to avoid situations in which a malfunction or failure of such Isocom Components products could cause loss of human life, bodily injury or damage to property.

In developing your designs, please ensure that Isocom Components products are used within specified operating ranges as set forth in the most recent Isocom Components products specifications.

The Isocom Components products listed in this document are intended for usage in general electronics applications (computer, personal equipment, office equipment, measuring equipment, industrial robotics, domestic appliances, etc.). These Isocom Components products are neither intended nor warranted for usage in equipment that requires extraordinarily high quality and/or reliability or a malfunction or failure of which may cause loss of human life or bodily injury (“Unintended Usage”). Unintended Usage include atomic energy control instruments, airplane or spaceship instruments, transportation Instruments, traffic signal instruments, combustion control instruments, medical Instruments, all types of safety devices, etc... Unintended Usage of Isocom Components products listed in this document shall be made at the customer’s own risk.

Gallium arsenide (GaAs) is a substance used in the products described in this document. GaAs dust and fumes are toxic. Do not break, cut or pulverize the product, or use chemicals to dissolve them. When disposing of the products, follow the appropriate regulations. Do not dispose of the products with other industrial waste or with domestic garbage.

The products described in this document are subject to the foreign exchange and foreign trade laws.

The information contained herein is presented only as a guide for the applications of our products. No responsibility is assumed by Isocom Components for any infringements of intellectual property or other rights of the third parties which may result from its use. No license is granted by implication or otherwise under any intellectual property or other rights of Isocom Components or others.

The information contained herein is subject to change without notice.