

MOC8021M, MOC8050M

Table 1. SAFETY AND INSULATION RATINGS

As per DIN EN/IEC 60747-5-5, this optocoupler is suitable for “safe electrical insulation” only within the safety limit data. Compliance with the safety ratings shall be ensured by means of protective circuits.

Parameter		Characteristics
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} × 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} × 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	6,000	V _{peak}

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Table 3. ELECTRICAL CHARACTERISTICS $T_A = 25\text{ C}$ unless otherwise specified

Symbol	Parameter	Test Conditions	Min	Typ	Max	Units
EMITTER						
V_F	Input Forward Voltage	$I_F = 10\text{ mA}$		1.18	2.00	V
I_R	Reverse Leakage Current	$V_R = 3.0\text{ V}$		0.001	10	μA
DETECTOR						
BV_{CEO}	Collector–Emitter Breakdown Voltage (MOC8021M)	$I_C = 1.0\text{ mA}, I_F = 0$	50	100		V
	(MOC8050M)		80	100		V
BV_{ECO}	Emitter–Collector Breakdown Voltage	$I_E = 100\text{ }\mu\text{A}, I_F = 0$	5	10		V
I_{CEO}	Collector–Emitter Dark Current	$V_{CE} = 60\text{ V}, I_F = 0$			1	μA
C_{CE}	Capacitance	$V_{CE} = 0\text{ V}, f = 1\text{ MHz}$		8		pF

Table 4. TRANSFER CHARACTERISTICS $T_A = 25\text{ C}$ unless otherwise specified

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TYPICAL CHARACTERISTICS

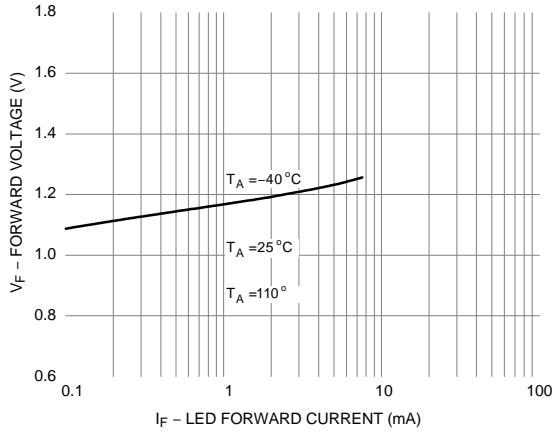


Figure 1. LED Forward Voltage vs. Forward Current

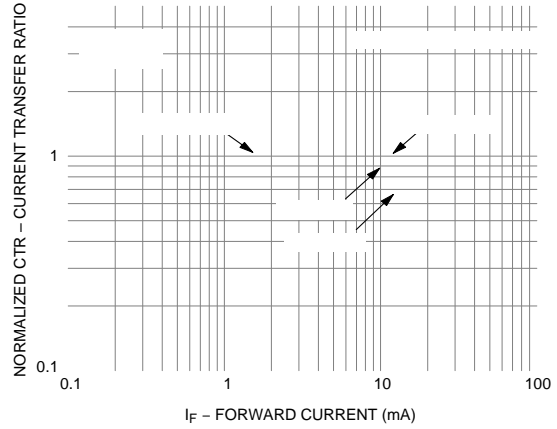


Figure 2. Normalized CTR vs. Forward Current

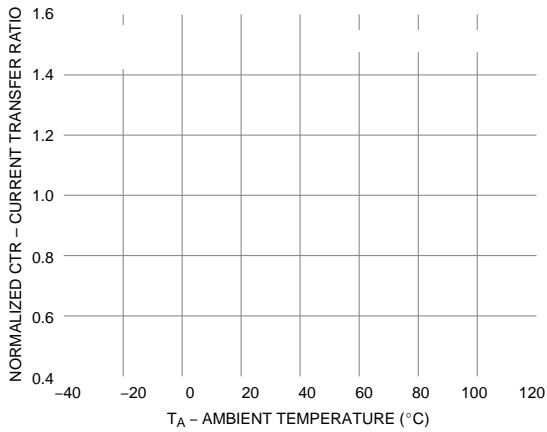


Figure 3. Normalized CTR vs. Ambient Temperature

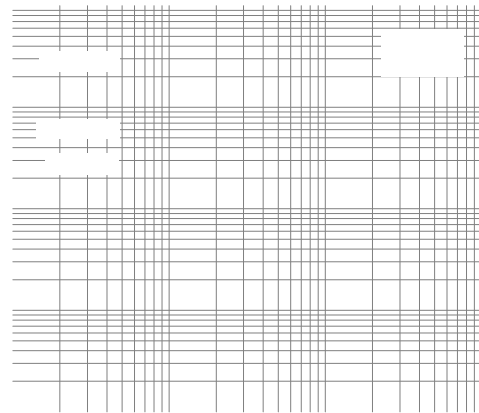


Figure 4. Turn-on Time vs. Forward Current

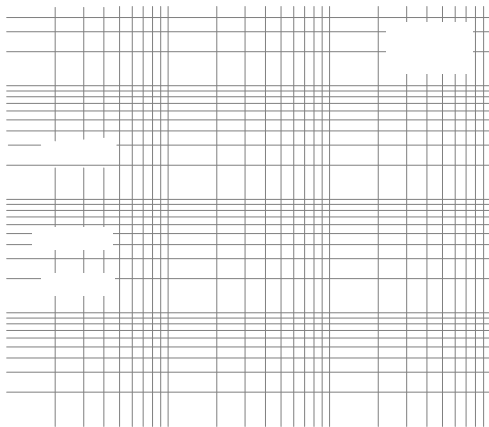


Figure 5. Turn-off Time vs. Forward Current

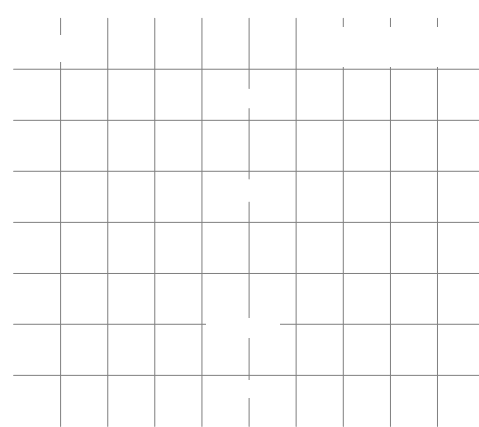


Figure 6. Normalized Collector-Emitter Current vs. Collector-Emitter Voltage

Typical Performance Curves (Continued)

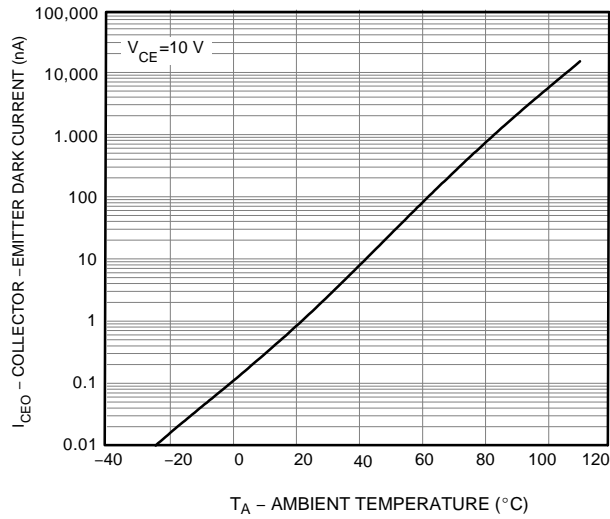


Figure 7. Dark Current vs. Ambient Temperature

Switching Time Test Circuit and Waveform

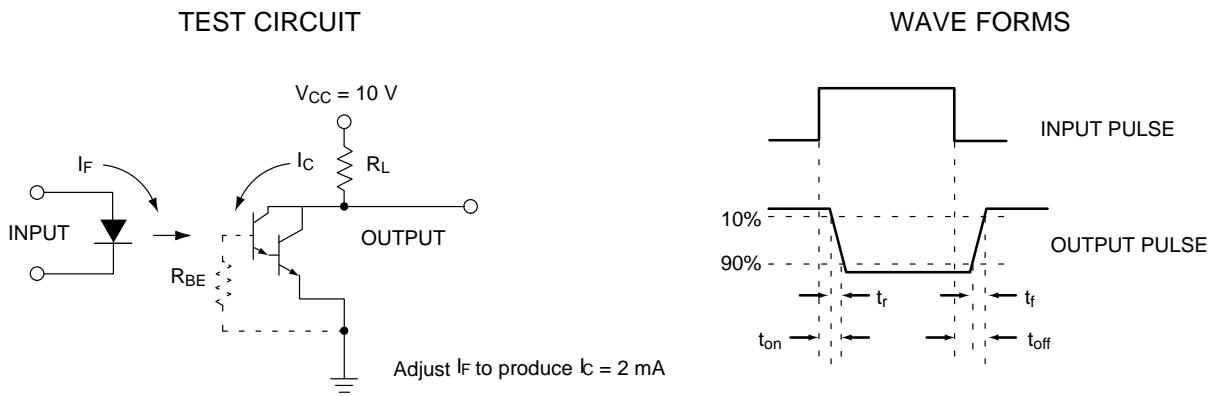
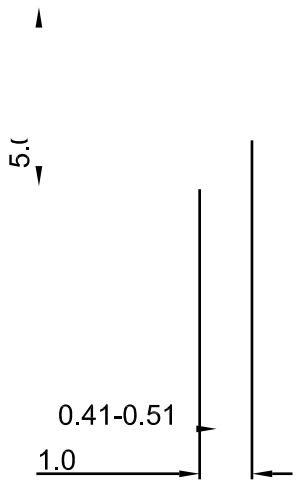


Figure 8. Switching Time Test Circuit and Waveform

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ORDERING INFORMATION

Device Order Number	Package	Packing Method†
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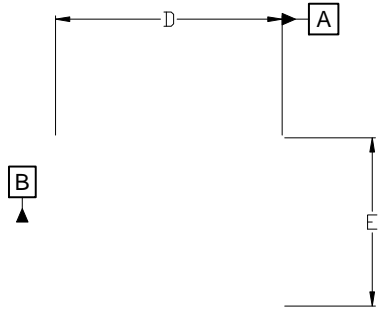


SE

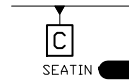


PDIP6 8.51x6.35, 2.54P
CASE 646BY
ISSUE A

DATE 15 JUL 2019



TOP VIEW



ALL DIMENSIONS ARE IN MILLIMETERS.
C) DIM ■

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