



# 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
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## MOC8021M, MOC8050M

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

Symbol	Parameter	Test Conditions	Min	Typ	Max	Units
<b>EMITTER</b>						
$V_F$	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	$\mu\text{A}$
<b>DETECTOR</b>						
$BV_{CEO}$	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	$\mu\text{A}$
$C_{CE}$	Capacitance	$V_{CE} = 0\text{ V}, f = 1\text{ MHz}$		8		pF

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

# MOC8021M, MOC8050M

## TYPICAL CHARACTERISTICS

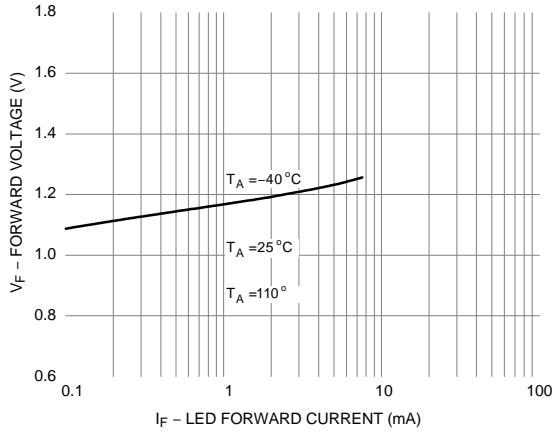


Figure 1. LED Forward Voltage vs. Forward Current

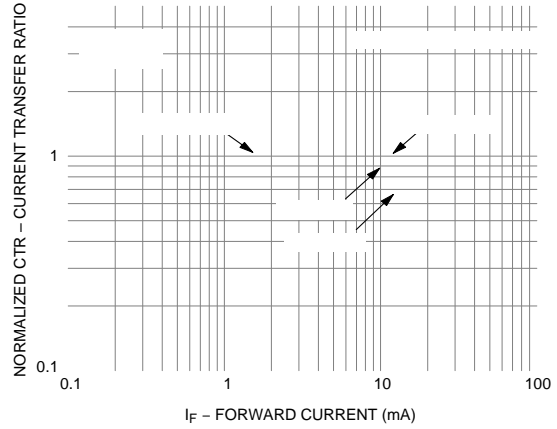


Figure 2. Normalized CTR vs. Forward Current

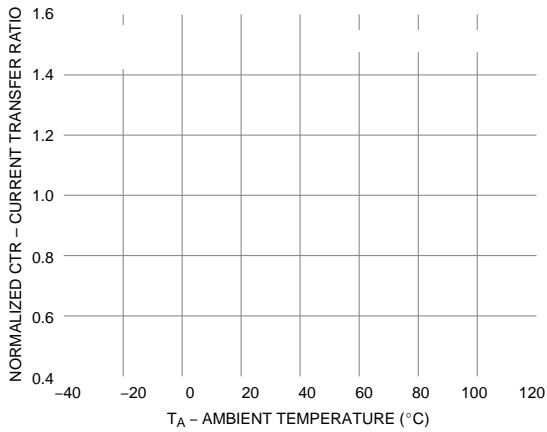


Figure 3. Normalized CTR vs. Ambient Temperature

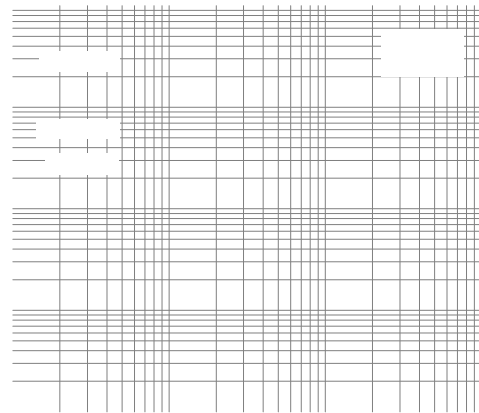


Figure 4. Turn-on Time vs. Forward Current

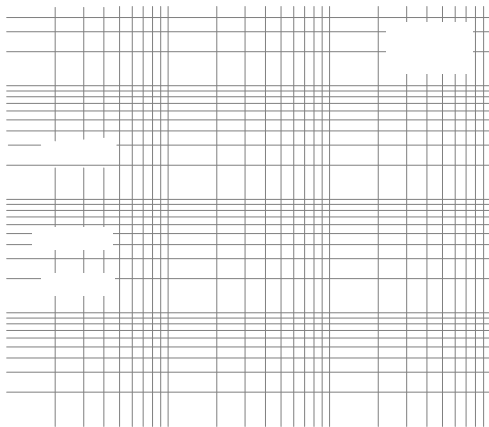


Figure 5. Turn-off Time vs. Forward Current

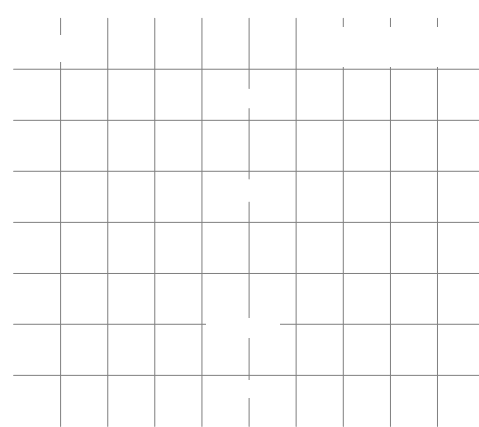


Figure 6. Normalized Collector-Emitter Current vs. Collector-Emitter Voltage

Typical Performance Curves (Continued)

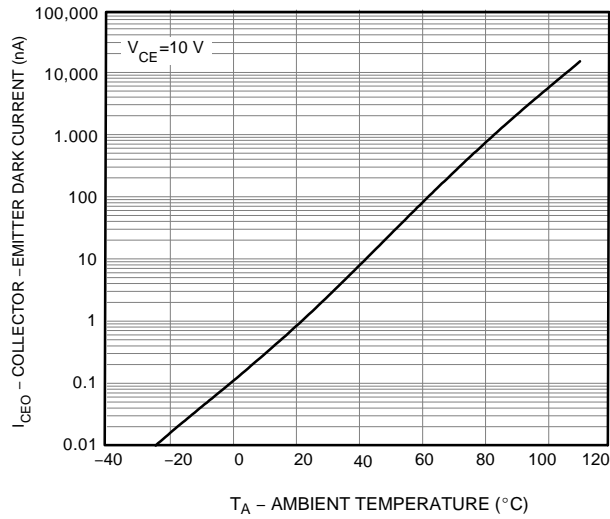


Figure 7. Dark Current vs. Ambient Temperature

Switching Time Test Circuit and Waveform

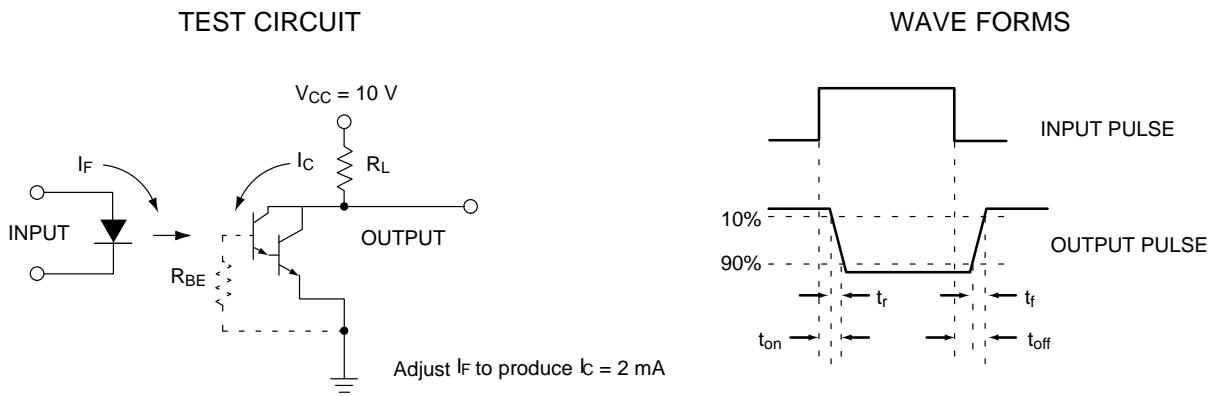


Figure 8. Switching Time Test Circuit and Waveform



# MOC8021M, MOC8050M

## ORDERING INFORMATION

Device Order Number	Package	Packing Method†
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**PDIP6 8.51x6.35, 2.54P**  
CASE 646BX  
ISSUE O

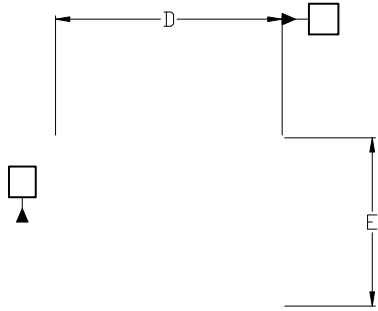
DATE 31 JUL 2016

NOTES:

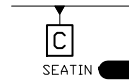
A) NO STANDARD APPL



PDIP6 8.51x6.35, 2.54P

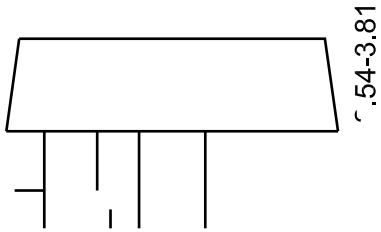
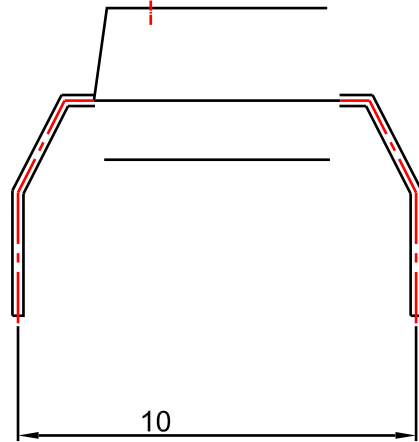
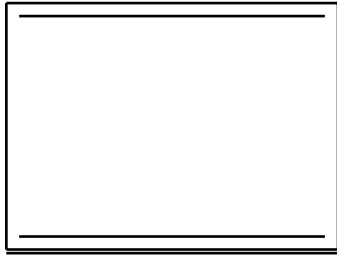


TOP VIEW



PDIP6 8.51x6.35, 2.54P  
CASE 646BZ  
ISSUE O

DATE 31 JUL 2016



NOTES:  
A) NC

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