



## FODM121 Series, FODM124, FODM2701, FODM2705

### 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. For Rated Mains Voltage	< 150 V <sub>RMS</sub>	I-IV
	< 300 V <sub>RMS</sub>	I-III
Climatic Classification		40/110/21
Pollution Degree (DIN VDE 0110/1.89)		2
Comparative Tracking Index		175

Symbol	Parameter	Value	Unit
V <sub>PR</sub>	Input to Output Test Voltage, Method A, V <sub>IORM</sub>		

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**ELECTRICAL CHARACTERISTICS**  $T_A = 25^\circ\text{C}$  Unless otherwise specified.

Symbol	Parameter	Device	Test Conditions	Min	Typ	Max	Unit
<b>INDIVIDUAL COMPONENT CHARACTERISTICS</b>							
<b>Emitter</b>							
$V_F$	Forward Voltage	FODM121 Series, FODM124	$I_F = 10 \text{ mA}$	1.0		1.3	V
		FODM2701	$I_F = 5 \text{ mA}$			1.4	
		FODM2705	$I_F = \pm 5 \text{ mA}$				
$I_R$	Reverse Current	FODM121 Series, FODM124, FODM2701	$V_R = 5 \text{ V}$			5	$\mu\text{A}$
<b>Detector</b>							
$BV_{CEO}$	Collector Emitter Breakdown Voltage	FODM121 Series, FODM124	$I_C = 1 \text{ mA}, I_F = 0$	80			V
		FODM2701, FODM2705		40			
$BV_{ECO}$	Emitter Collector Breakdown Voltage	All	$I_E = 100 \mu\text{A}, I_F = 0$	7			V
$I_{CEO}$	Collector Dark Current	All	$V_{CE} = 40 \text{ V}, I_F = 0$ FODM2701				



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## TYPICAL PERFORMANCE CURVES (CONTINUED)

( $T_A = 25^\circ\text{C}$  UNLESS OTHERWISE SPECIFIED)

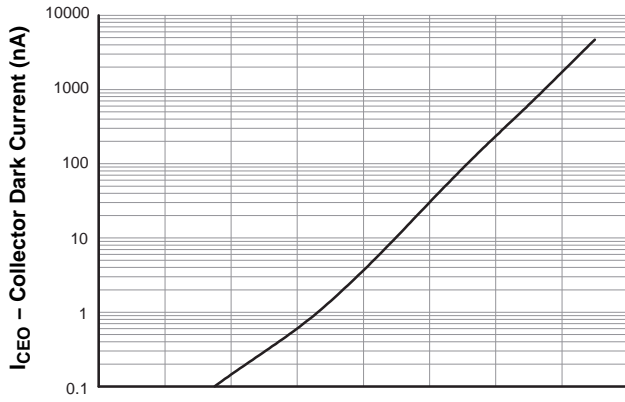


Figure 7. Collector Dark Current vs. Ambient Temperature (FODM121/2701/2705)

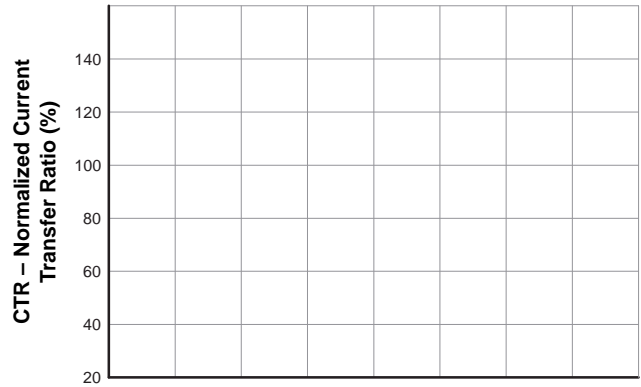


Figure 8. Normalized Current Transfer Ratio vs. Ambient Temperature (FODM121/2701/2705)

Switching Time ( $\mu\text{s}$ )

$R_L$  – Load Resistance (k $\Omega$ )

Figure 9. Switching Time vs. Load Resistance (FODM121/2701/2705)

$V_{CE(sat)}$  – Collector–Emitter Saturation Voltage (V)

Figure 10. Collector–Emitter Saturation Voltage vs. Ambient Temperature (FODM124)

CTR – Current Transfer Ratio (%)

$I_F$  – Forward Current (mA)

Figure 11. Current Transfer Ratio vs. Forward Current (FODM124)

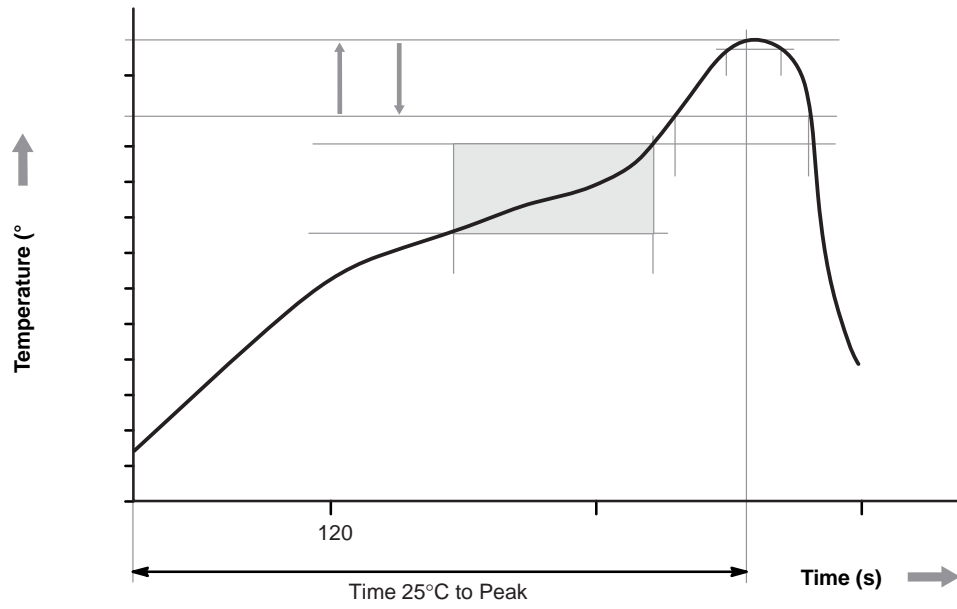
$I_C$  – Collector Current (mA)

$I_F$  – Forward Current (mA)

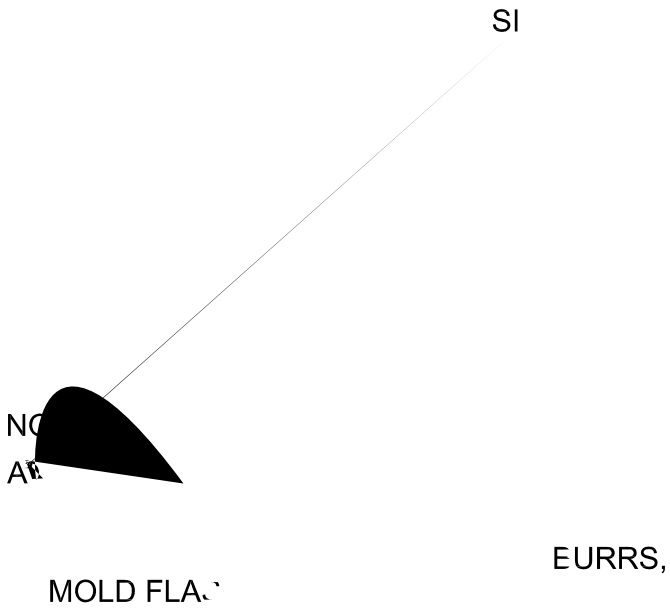
Figure 12. Collector Current vs. Forward Current (FODM124)



REFLOW PROFILE



MFP4 3.85X4.4, 2.54P





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