



JOC247

Rev.A.1.0

DESCRIPTION:

The JOC247 is a photoelectric coupler composed of light-emitting diode and photo transistor. It is packaged in a 16-pin at SSOP16. The products are widely used in DC-DC converter, communications equipment, programmable controller and signal transmission.

MAIN FEATURES

- Current transfer ratio: 50%-600% ($I_F=5mA$, $V_{CE}=5V$, $T_a=25^\circ C$)
- High isolation voltage between input and output($V_{ISO}=3750 V_{rms}$)
- Collector-emitter breakdown voltage $BV_{CEO} 80V$
- Operating temperature range $-55^\circ C$ to $110^\circ C$
- UL VDE CQC approvals

ABSOLUTE MAXIMUM RATINGS (Temperature= $25^\circ C$)

Parameter		Symbol	Value	Unit
Input	Forward Current	I_F	60	mA
	Peak Forward Current	I_{FP}	1	A
	Reverse Voltage	V_R	6	V
	Power Dissipation	P_D	100	mW

Collector-emitter Voltage V_{CEO} mW

Output

ELECTRICAL CHARACTERISTICS (Temperature=25°C)

Parameter		Symbol	Condition	Min.	Typ.	Max.	Unit
Input	Forward Voltage	V_F	$I_F=10\text{mA}$	-	1.2	1.3	V
			$I_F=20\text{mA}$	-	1.24	1.4	
	Reverse Current	I_R	$V_R=6\text{V}$	-	-	1	μA
	Terminal Capacitance	C_t	$V=0,$ $f=1\text{MHz}$	-	30	250	pF
Output	Collector-Emitter dark current	I_{CEO}	$V_{CE}=20\text{V},$ $I_F=0$	-	-	50	nA
	Collector-Emitter breakdown voltage	BV_{CEO}	$I_C=0.1\text{mA}$ $I_F=0$	80	-	-	V
	Emitter-Collector breakdown voltage	BV_{ECO}	$I_E=0.1\text{mA}$ $I_F=0$	7	-	-	V
Transfer Characteristics	Current transfer ratio	CTR	$I_F=5\text{mA}$ $V_{CE}=5\text{V}$	50	-	600	%
	Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_F=20\text{mA}$ $I_C=1\text{mA}$	-	0.06	0.2	V
	Isolation resistance	R_{IO}	DC500V 40~60%R.H.	5×10^{10}	10^{11}	-	
	Floating Capacitance	C_{IO}	$V=0,$ $f=1\text{MHz}$	-	0.4	1	pF
	Cut-off Frequency	f_c	$V_{CE}=5\text{V},$ $I_C=2\text{mA}$ $R_L=100\ \Omega,$ -3dB	-	80	-	kHz
	Rise Time	t_r	$V_{CE}=2\text{V},$ $I_C=2\text{mA}$ $R_L=100\ \Omega$	-	5	18	μs
	Fall Time	t_f		-	4	18	μs
Response Time	t_{on}		-	9			

ORDERING AND MARKING INFORMATION

MARKING INFORMATION

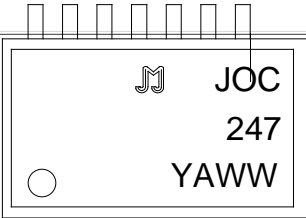


FIG.7: Normalized Current Transfer Ratio vs. Ambient Temperature

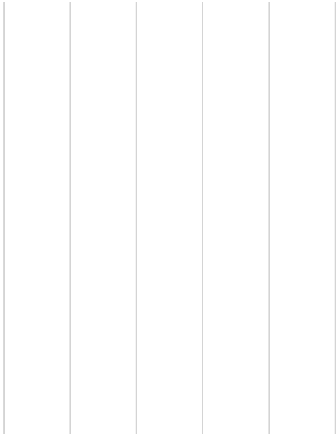
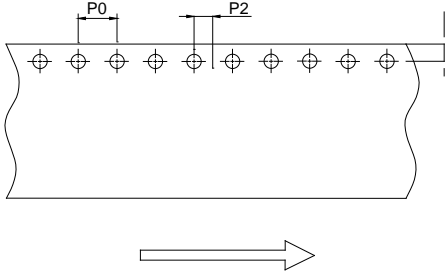


FIG.8: Normalized Collector-emitter Saturation Voltage vs. Ambient Temperature

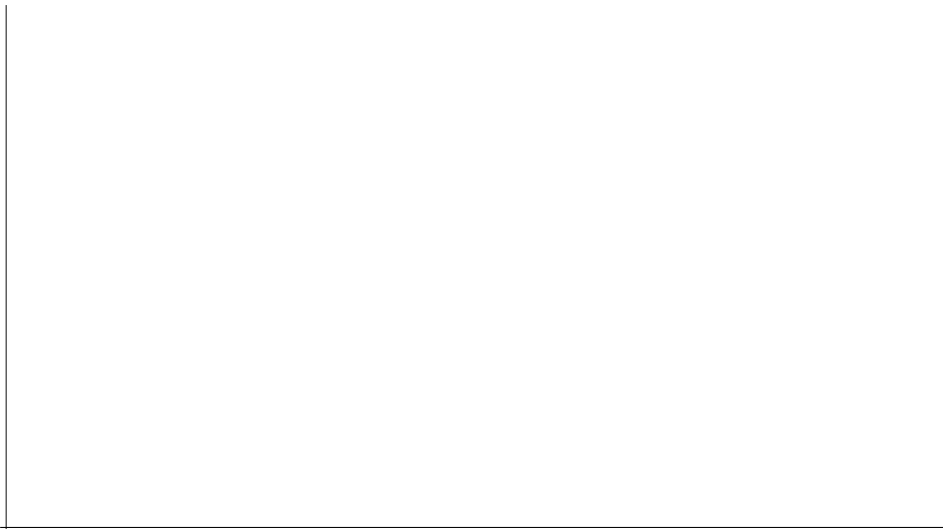
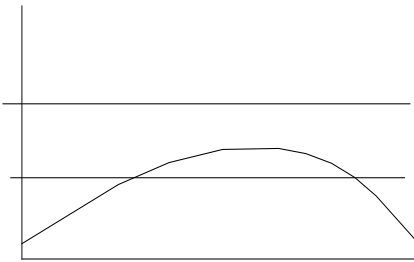
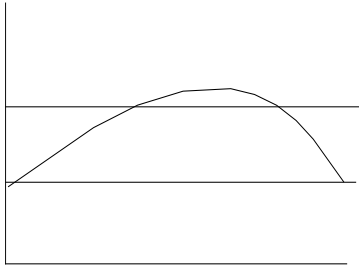
Package Dimension (Unit: mm)



CARRIER TAPE SPECIFICATIONS (Dimensions in mm unless otherwise stated)




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