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)
High isolation voltage between input and output(V_{ISO}=3750 V_{rms})
Collector-emitter breakdown voltage BV_{CEO}≥80V
Operating temperature range -55°C to 110°C
UL VDE CQC approvals

ABSOLUTE MAXIMUM RATINGS (Temperature=25°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
Output	Collector-emitter Voltage	V_{CEO} mW		

ELECTRICAL CHARACTERISTICS (Temperature=25°C)

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

ORDERING AND MARKING INFORMATION

MARKING INFORMATION

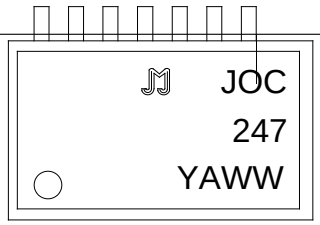
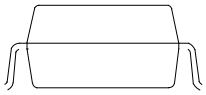


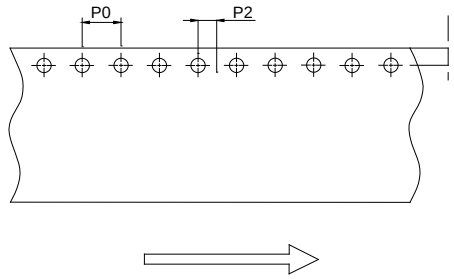
FIG.7: Normalized Current Transfer Ratio vs. Ambient Temperature

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

Package Dimension (Unit: mm



CARRIER TAPE SPECIFICATIONS (Dimensions in mm unless otherwise stated)



REFLOW INFORMATION