

JOC352

Rev.A.1.0

DESCRIPTION:

The JOC352 combines an AlGaAs infrared emitting diode as the emitter which is optically coupled to a silicon planar darlington phototransistor detector in a plastic SOP4 package. With the robust coplanar double mold structure, JOC352 provides the most stable isolation feature. The products are widely used in sequence controller, telephone/fax, system appliances, measuring instrument and programmable logic controller.

MAIN FEATURES

- High current transfer ratio β CTR 1 1000% @ $I_F=1\text{mA}$, $V_{CE}=2\text{V}$
- High isolation voltage between input and output ($V_{iso}=3,750\text{Vrms}$)
- Operating temperature up to $+110^\circ\text{C}$
- Collector-Emitter voltage BV_{CEO} 1350V
- CQC approved
- VDE approved
- UL approved
- The products comply with REACH and HF

ABSOLUTE MAXIMUM RATINGS (Case temperature= 25°C)

Parameter		Symbol	Value	Unit
Input	Forward Current	I_F	60	mA
	Reverse Voltage	V_R	6	V
	Peak Forward Current	I_{FP}	1 ⁷	A
	Power Dissipation	P_D	100	mW
Output	Collector-emitter Voltage	V_{CEO}	350	V
	Emitter-collector Voltage	V_{ECO}	0.1	V
	Collector Current	I_C	150	mA
Power Dissipation		P_C	150	mW

Storage Temperature	T_{stg}	-55~+125	
Soldering Temperature	T_{sol}	260	

NOTE1 100 μ s pulse, 100Hz frequencyNOTE2 Δ for 1minute, R.H.=40%

ELECTRICAL CHARACTERISTICS (Temperature=25°C)

Parameter		Symbol	Condition	Min.	Typ.	Max.	Unit
Input	Forward Voltage	V_F	$I_F=10mA$	-	1.2	1.4	V
			$I_F=20mA$	-	1.24	1.5	
	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}	$V_{CE}=200V,$ $I_F=0mA$	-	-	50	nA
	Collector-Emitter breakdown voltage	BV_{CEO}	$I_C=0.1mA$ $I_F=0mA$	350	-	-	V
	Emitter-Collector breakdown voltage	BV_{ECO}	$I_E=0.1mA$ $I_F=0mA$	0.1	-	-	V
Transfer Characteristics	Collector current	I_C	$I_F=1mA$ $V_{CE}=2V$	10	-	150	mA
	Current transfer ratio	CTR'	$I_F=1mA$ $V_{CE}=2V$	1000	-	15000	%
	Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_F=20mA$ $I_C=100mA$	-	-	1.2	V
	Isolation resistance	R_{IO}	DC500V 40~60%R.H.	5×10^{10}	-	-	
	Floating Capacitance	C_{IO}	$V=0,$ $f=1MHz$	-	0.6	1	pF
	Cut-off Frequency	f_c	$V_{CE}=2V,$ $I_C=20mA$ $R_L=100 \Omega,$ -3dB	-	7	-	kHz

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ORDERING AND MARKING INFORMATION

MARKING INFORMATION

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Characteristics Curves

FIG.1: Forward Current vs. Ambient Temperature

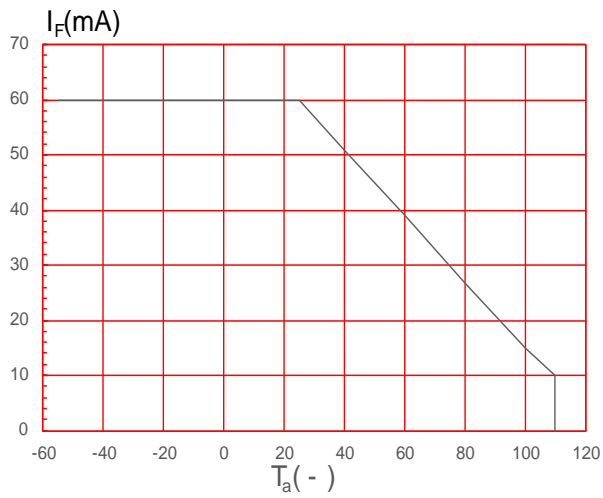


FIG.2: Collector Power Dissipation vs. Ambient Temperature

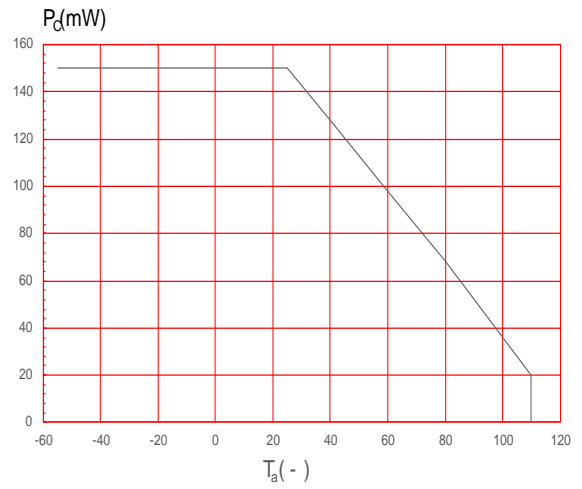


FIG.3: Forward Current vs. Forward Voltage

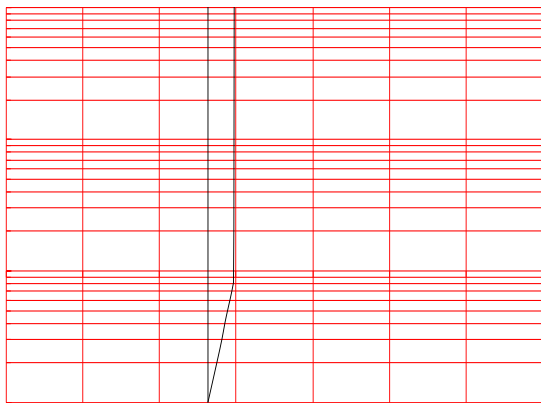


FIG.4: Normalized Collector Dark Current vs. Ambient Temperature

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

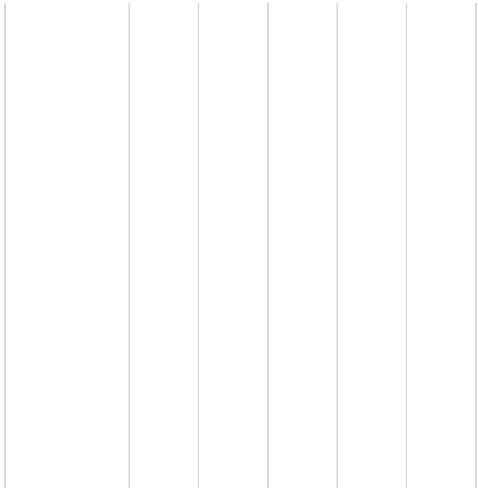


FIG.8: Normalized Collector-emitter Saturation Voltage vs. Ambient Temperature

Test Circuits

FIG.11: Test Circuits of Response Time

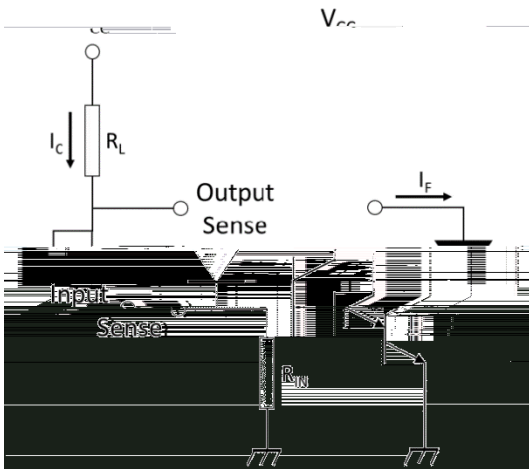


FIG.12: Curves of Response Time

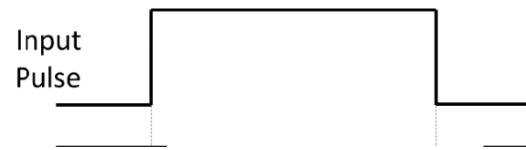
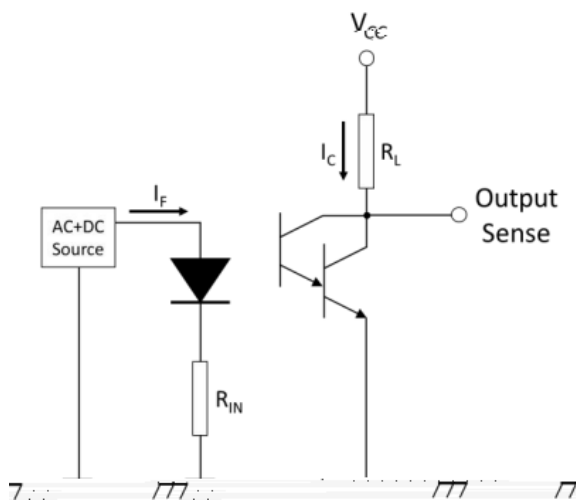


FIG.13: Test Circuits of Frequency Response



REFLOW INFORMATION

