



JOC217 Series

Rev.2.1

Description

The JOC217 series combine an AlGaAs infrared emitting diode as the emitter which is optically coupled to a silicon planar phototransistor detector in a plastic ssop package with different lead forming options.

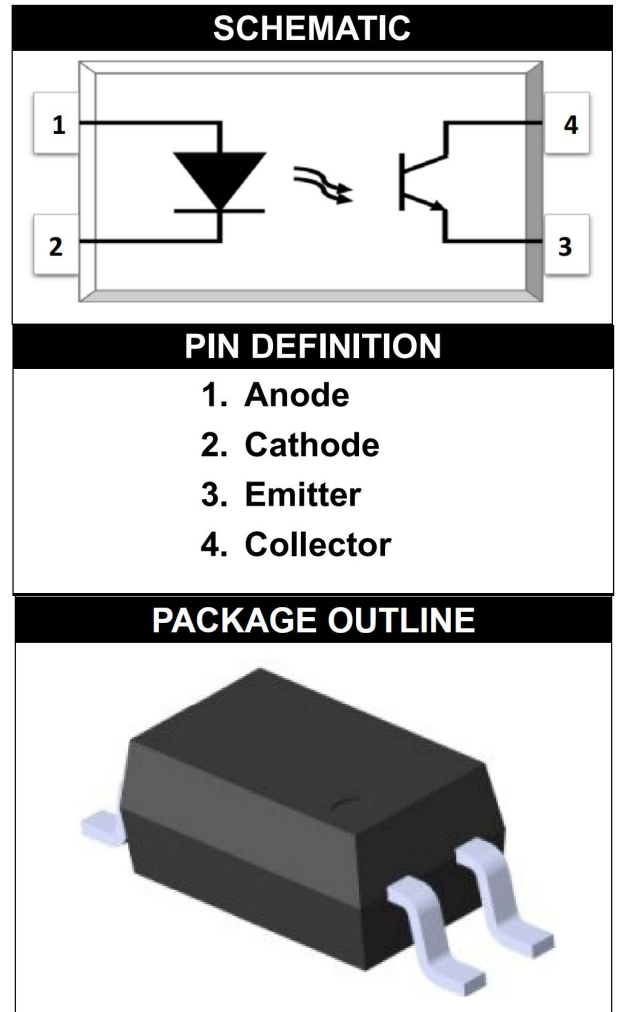
With the robust coplanar double mold structure, JOC217 series provide the most stable isolation feature.



Features

- Current transmission ratio (CTR)Range: 80%~600% ($I_F=5\text{mA}, V_{CE}=5\text{V}$)
- Input-output isolation voltage($V_{iso}=3750\text{ V rms}$)

Application

- DC-DC converter
- Communication equipment
- Programmable controller
- signal transmission



ORDERING AND MARKING INFORMATION	
MARKING INFORMATION	
	JOC :Company Abbr 217 : Part Number X : CTR Rank Y : Fiscal Year A : Manufacturing Code WW : Work Week
ORDERING INFORMATION	LABEL INFORMATION
JOC217X(Z)-G	
JOC – Company Abbr 217 – Part Number X – Rank (A/B/C/D/L/Q or None) Z – Tape and Reel Option (T1/T2) G – Green	

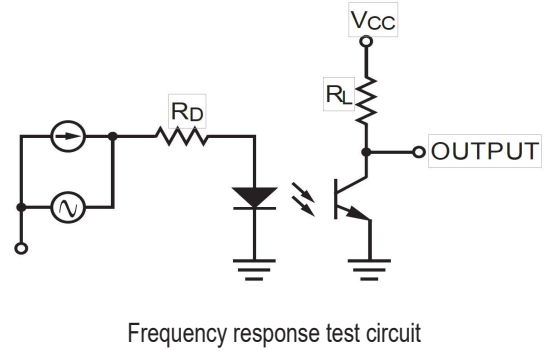
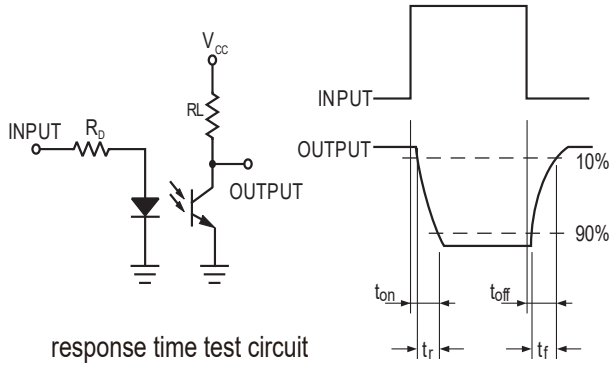
Absolute Maximum Ratings @ 25°C

	Parameter	Symbol	Rating	Unit
Input	Forward current	I _F	50	mA
	Peak forward current	I _{FP}	1	A
	Reverse voltage	V _R	6	V
	power dissipation	P _D	70	mW
	Rating reduction factor	P _{DD}	2.0	mW/°C
	thermal resistance(Junction environment)	R _{thJ-A}	325	°C/W
	thermal resistance(Junction shell)	R _{thJ-C}	200	°C/W
Output	Collector power consumption	P _C	150	mW
	Rating reduction factor	P _{CD}	3.1	mW/°C
	Collector current	I _C	50	mA
	Collector Emitter Voltage	V _{CEO}	80	V
	Emitter collector voltage	V _{ECO}	7	V
Total power consumption		P _{tot}	200	mW
Isolation voltage		V _{iso}	3750	V _{rms}
Working temperature		T _{opr}	-55~+110	°C
Storage temperature		T _{stg}	-55~+125	°C
Welding temperature		T _{sol}	260	°C

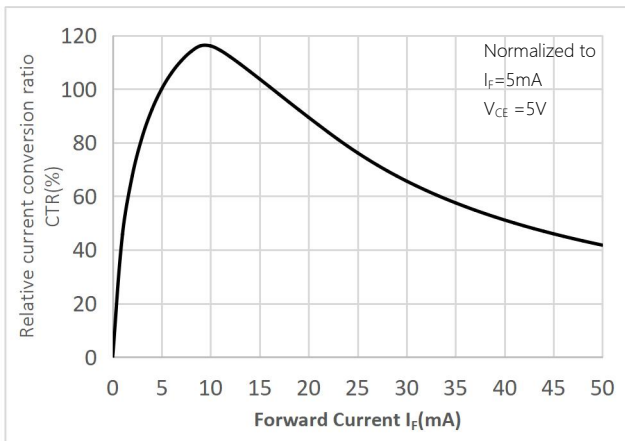
Electrical parameters@25°C

	Parameter	Symbol	Condition	Min	Typ	Max	Unit
Input	Forward voltage	V_F	$I_F=20\text{mA}$	-	1.2	1.4	V
	Reverse current	I_R	$V_R=4\text{V}$	-	-	10	μA
	Terminal capacitance	C_t	$V=0, f=1\text{kHz}$	-	30	250	pF
Output	Collector dark current	I_{CEO}	$V_{CE}=20\text{V}$	-	-	100	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
Trans Char	Current Transmission ratio	CTR	$I_F=5\text{mA}, V_{CE}=5\text{V}$	80	-	600	%
	Collector Emitter Saturation Voltage Drop	$V_{CE(sat)}$	$I_F=10\text{mA}, I_C=1\text{mA}$	-	0.1	0.2	V
	Isolation resistance	R_{ISO}	DC500V, 40~60%R.H.	5×10^{10}	1×10^{11}	-	Ω
	Isolation capacitance	C_f	$V=0, f=1\text{MHz}$	-	0.3	1.0	pF
	rise time	T_r	$V_{CE}=2\text{V}$ $I_C=2\text{mA}, R_L=100\Omega$	-	3	18	μs
	Descent time	T_f		-	2	18	μs
C T R	JOC217	CTR	$I_F=5\text{mA}, V_{CE}=5\text{V}$	80	-	600	%
	JOC217A			80	-	160	
	JOC217B			130	-	260	
	JOC217C			200	-	400	
	JOC217D			300	-	600	
	JOC217L			80	-	100	
	JOC217Q			100	-	200	

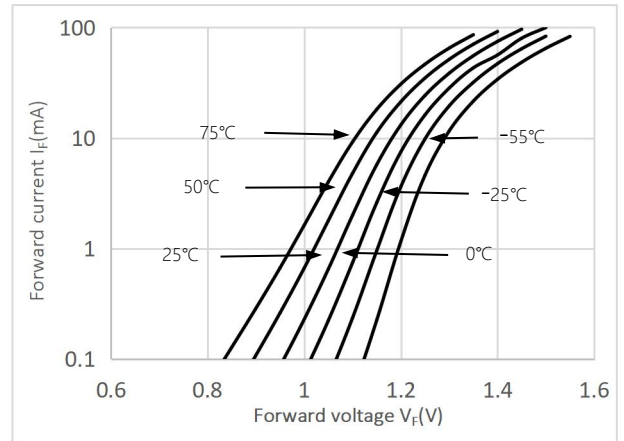
Typical photoelectric characteristic curve



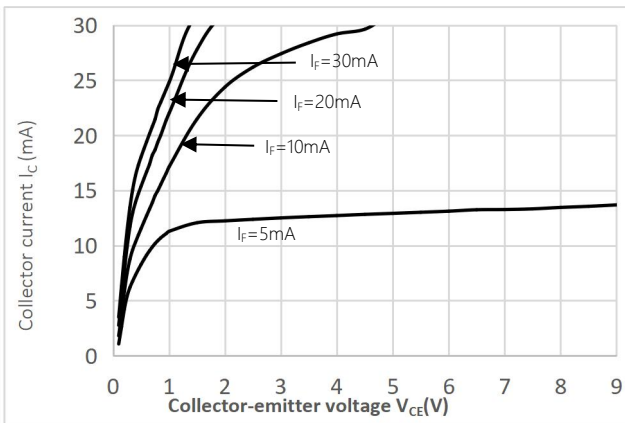
Relative Current Transfer Ratio vs. Forward Current



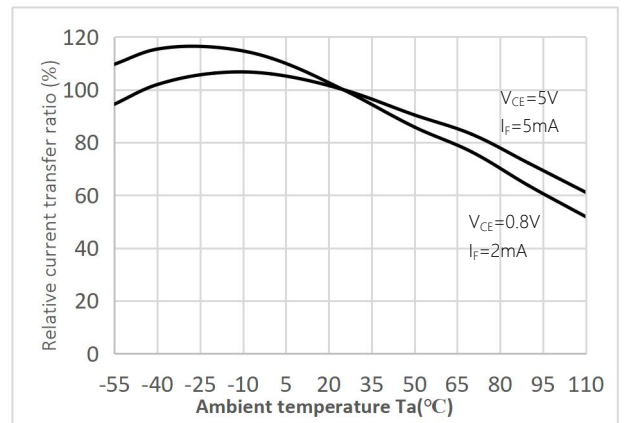
Forward Current vs. Forward Voltage



Collector Current vs. Collector-emitter Voltage

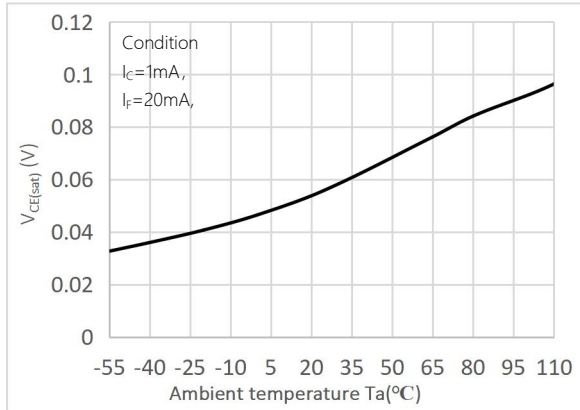


Relative Current Transfer Ratio vs. Ambient Temperature

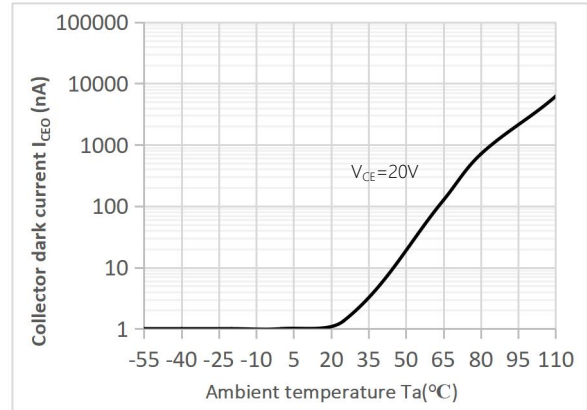




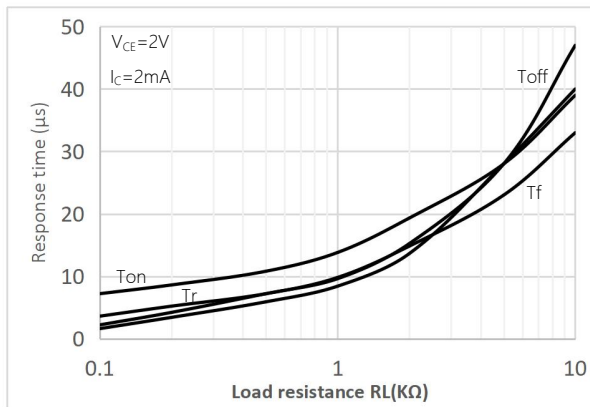
Collector-emitter Saturation Voltage vs. Ambient Temperature



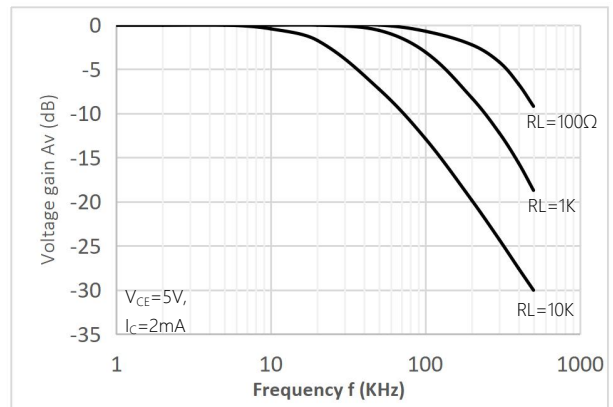
Collector Dark Current vs Ambient Temperature



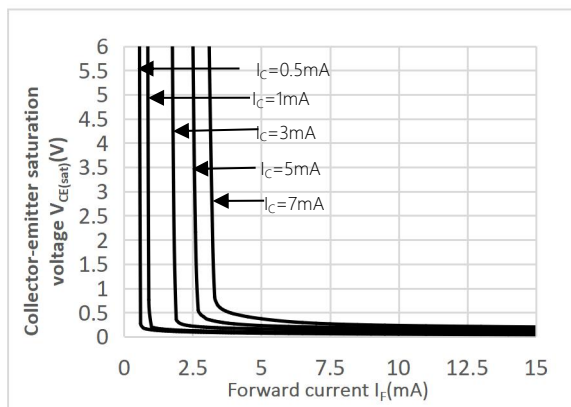
Response Time vs. Load Resistance



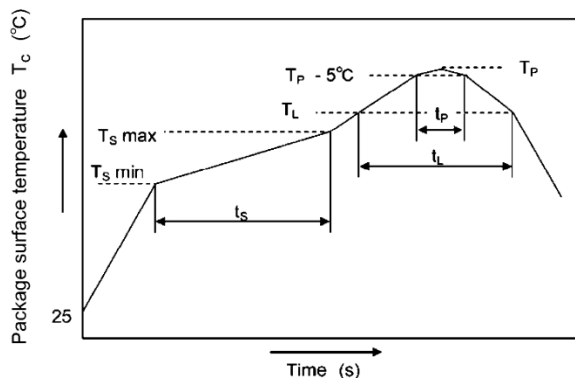
Frequency Response



Collector-emitter Saturation Voltage vs Forward Current



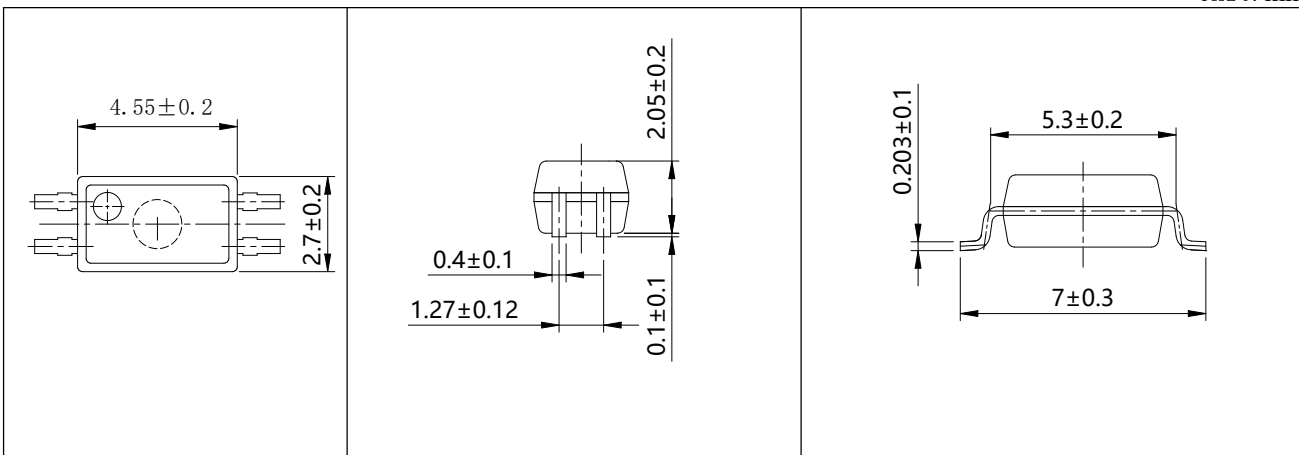
Reflow soldering temperature curve



	Symbol	Min	Max	Unit
Preheat temperature	T_s	150	200	°C
Preheat time	t_s	60	120	s
Ramp-up rate (T_L to T_P)			3	°C/s
Liquidus temperature	T_L	217		°C
Time above T_L	t_L	60	150	s
Peak temperature	T_P		260	°C
Time during which T_c is between ($T_P - 5$) and T_P	t_p		30	s
Ramp-down rate (T_P to T_L)			6	°C/s

Mechanical Dimensions

Unit: mm



4-pin SSOP

Package

Package Type	Packing Form	Quantity per Reel	Quantity per Box	Quantity per Carton	Antistatic Bag Specification	Box Specification	Carton Specificatio	Note
SSOP4	Reel (φ330mm Blue)	3000 pcs /reel	2 reels /box	10 boxes /ctn	450*390*0.1mm	34*6*34cm	n 38*36*36.5cm	Leave 50 Spaces at the beginning and 100 Spaces at the end

■ **SSOP-4 Tape packing**
3000/disk

- 1) Quantity per box: 60000
- 2) Quantity per volume: 3000
- 3) Inner packaging: 2 volumes/box
- 4) Sketch Map: (Unit: mm)

