

SOT-89-3L Plastic-Encapsulate Transistors

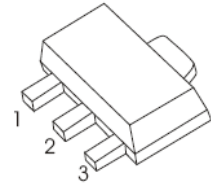
CJ303PL TRANSISTOR (PNP)

FEATURES

- Small Flat Package
- High DC Current Gain
- Ultra Low Collector-Emitter Saturation Voltage

SOT-89-3L

1. BASE
2. COLLECTOR
3. EMITTER



MARKING:303PL

MAXIMUM RATINGS ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	-50	V
V_{CEO}	Collector-Emitter Voltage	-35	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_{C}	Collector Current	-3	A
P_{C}	Collector Power Dissipation	500	mW
$R_{\theta\text{JA}}$	Thermal Resistance From Junction To Ambient	250	$^{\circ}\text{C}/\text{W}$
T_{j}	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	-55~+150	$^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS ($T_a=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(\text{BR})\text{CBO}}$	$I_{\text{C}}=-0.1\text{mA}, I_{\text{E}}=0$	-50			V
Collector-emitter breakdown voltage	$V_{(\text{BR})\text{CEO}}$	$I_{\text{C}}=-10\text{mA}, I_{\text{B}}=0$	-35			V
Emitter-base breakdown voltage	$V_{(\text{BR})\text{EBO}}$	$I_{\text{E}}=-0.1\text{mA}, I_{\text{C}}=0$	-5			V
Collector cut-off current	I_{CBO}	$V_{\text{CB}}=-35\text{V}, I_{\text{E}}=0$			-100	nA
Collector cut-off current	I_{CES}	$V_{\text{CES}}=-35\text{V}$			-100	nA
Emitter cut-off current	I_{EBO}	$V_{\text{EB}}=-4\text{V}, I_{\text{C}}=0$			-100	nA
DC current gain	h_{FE}^*	$V_{\text{CE}}=-1.5\text{V}, I_{\text{C}}=-1\text{A}$	100			
		$V_{\text{CE}}=-1.5\text{V}, I_{\text{C}}=-1.5\text{A}$	100		400	
		$V_{\text{CE}}=-3\text{V}, I_{\text{C}}=-2\text{A}$	100			
Collector-emitter saturation voltage	$V_{\text{CE}(\text{sat})}^*$	$I_{\text{C}}=-0.8\text{A}, I_{\text{B}}=-26\text{mA}$			-0.15	V
		$I_{\text{C}}=-1.2\text{A}, I_{\text{B}}=-40\text{mA}$			-0.2	V
		$I_{\text{C}}=-2\text{A}, I_{\text{B}}=-66.6\text{mA}$			-0.25	V
		$I_{\text{C}}=-3\text{A}, I_{\text{B}}=-100\text{mA}$			-0.4	V
Base-emitter saturation voltage	$V_{\text{BE}(\text{sat})}^*$	$I_{\text{C}}=-1.2\text{A}, I_{\text{B}}=-40\text{mA}$			-1	V
		$I_{\text{C}}=-3\text{A}, I_{\text{B}}=-100\text{mA}$			-1.2	V
Base-emitter voltage	V_{BE}^*	$V_{\text{CE}}=-3\text{V}, I_{\text{C}}=-2\text{A}$			-1	V

Transition frequency	f_T	$V_{CE}=-5V, I_C=-100mA,$ $f=100MHz$	100			MHz
Collector input capacitance	C_{ib}	$V_{EB}=-0.5V, I_C=0, f=1MHz$			650	pF
Collector output capacitance	C_{ob}	$V_{CB}=-3V, I_E=0, f=1MHz$			100	pF
Turn on time	t_{on}	$V_{CC}=-10V, I_C=-1A, I_{B1}=-100mA, R_L=3\Omega$		35		ns
Turn off time	t_{off}	$V_{CC}=-10V, I_C=1A, I_{B1}=I_{B2}=-100mA, R_L=3\Omega$		225		ns

*Pulse width=300 μ s, Duty cycle<2%.