

INCHANGE Semiconductor

isc Product Specification

isc Silicon PNP Darlington Power Transistor

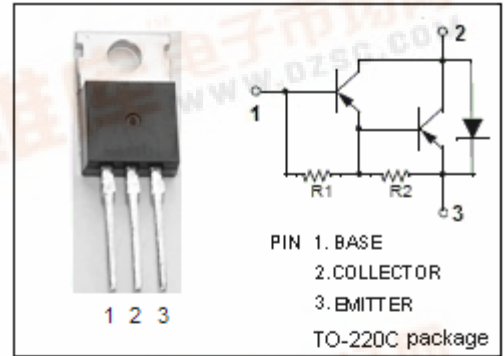
TIP127

DESCRIPTION

- High DC Current Gain-
: $h_{FE} = 1000(\text{Min}) @ I_C = -3\text{A}$
- Collector-Emitter Sustaining Voltage-
: $V_{CEO(\text{SUS})} = -100\text{V}(\text{Min})$
- Low Collector-Emitter Saturation Voltage-
: $V_{CE(\text{sat})} = -2.0\text{V}(\text{Max}) @ I_C = -3\text{A}$
= $-4.0\text{V}(\text{Max}) @ I_C = -5\text{A}$
- Complement to Type TIP122

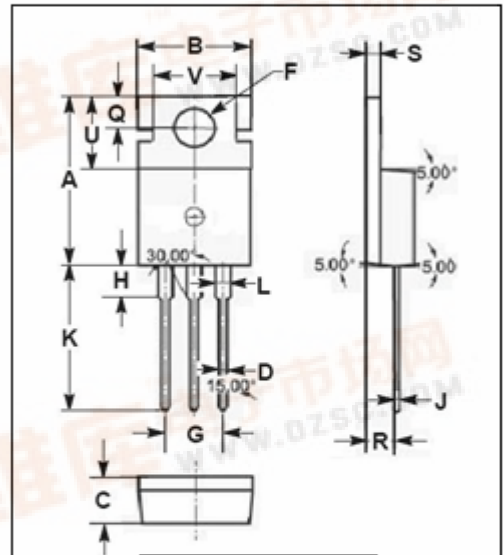
APPLICATIONS

- Designed for general purpose amplifier and low speed switching applications.



ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V _{CBO}	Collector-Base Voltage	-100	V
V _{CEO}	Collector-Emitter Voltage	-100	V
V _{EBO}	Emitter-Base Voltage	-5	V
I _C	Collector Current-Continuous	-5	A
I _{CM}	Collector Current-Peak	-8	A
I _B	Base Current-DC	-120	mA
P _C	Collector Power Dissipation T _C =25°C	65	W
	Collector Power Dissipation T _a =25°C	2	
T _j	Junction Temperature	150	°C
T _{stg}	Storage Temperature Range	-65~150	°C



DIM	mm	
	MIN	MAX
A	15.70	15.90
B	9.90	10.10
C	4.20	4.40
D	0.70	0.90
F	3.40	3.60
G	4.98	5.18
H	2.70	2.90
J	0.44	0.46
K	13.20	13.40
L	1.10	1.30
Q	2.70	2.90
R	2.50	2.70
S	1.29	1.31
U	6.45	6.65
V	8.66	8.86

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R _{th j-c}	Thermal Resistance, Junction to Case	1.92	°C/W
R _{th j-a}	Thermal Resistance, Junction to Ambient	62.5	°C/W



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ELECTRICAL CHARACTERISTICS

 $T_C=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C = -0.1\text{A}, I_B = 0$	-100			V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	$I_C = -3\text{A}, I_B = -12\text{mA}$			-2.0	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation voltage	$I_C = -5\text{A}, I_B = -20\text{mA}$			-4.0	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C = -3.0\text{A}; V_{CE} = -3\text{V}$			-2.5	V
I_{CBO}	Collector Cutoff Current	$V_{CB} = -100\text{V}, I_E = 0$			-0.2	mA
I_{CEO}	Collector Cutoff Current	$V_{CE} = -50\text{V}, I_B = 0$			-0.5	mA
I_{EBO}	Emitter Cutoff Current	$V_{EB} = -5\text{V}; I_C = 0$			-2	mA
h_{FE-1}	DC Current Gain	$I_C = -0.5\text{A}; V_{CE} = -3\text{V}$	1000			
h_{FE-2}	DC Current Gain	$I_C = -3.0\text{A}; V_{CE} = -3\text{V}$	1000			
C_{OB}	Output Capacitance	$I_E = 0; V_{CB} = -10\text{V}, f = 0.1\text{MHz}$			300	pF

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