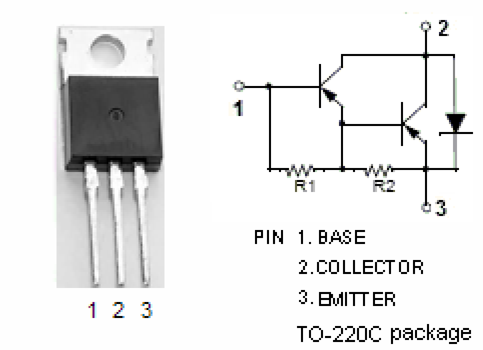
isc Silicon PNP Darlington Power Transistor **TIP116**

DESCRIPTION

- High DC Current Gain-
  : h_{FE} = 1000(Min)@ I_C= -1A
- Collector-Emitter Sustaining Voltage-
  : $V_{CEO(SUS)}$ = -80V(Min)
- Low Collector-Emitter Saturation Voltage-
  : $V_{CE(sat)}$ = -2.5V(Max)@ I_C= -2A
- Complement to Type TIP111



APPLICATIONS

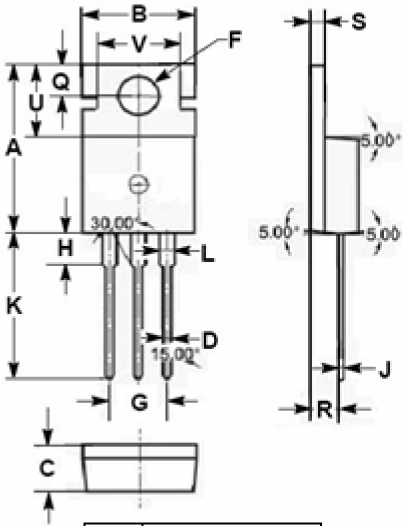
- Designed for general purpose amplifier and low speed switching applications.

ABSOLUTE MAXIMUM RATINGS (T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	-80	V
V_{CEO}	Collector-Emitter Voltage	-80	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current-Continuous	-2	A
I_{CM}	Collector Current-Peak	-4	A
I_B	Base Current	-50	mA
P_C	Collector Power Dissipation T_C=25℃	50	W
	Collector Power Dissipation T_a=25℃	2	
T_j	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-65~150	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	2.5	℃/W
$R_{th\ j\text{-}a}$	Thermal Resistance,Junction to Ambient	62.5	℃/W



	mm	
DIM	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

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	I_C= -30mA, I_B= 0	-80			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= -2A, I_B= -8mA			-2.5	V
$V_{BE(on)}$	Base-Emitter On Voltage	I_C= -2A; V_{CE}= -4V			-2.8	V
I_{CBO}	Collector Cutoff Current	V_{CB}= -80V, I_E= 0			-1.0	mA
I_{CEO}	Collector Cutoff Current	V_{CE}= -40V, I_B= 0			-2.0	mA
I_{EBO}	Emitter Cutoff Current	V_{EB}= -5V; I_C= 0			-2.0	mA
h_{FE-1}	DC Current Gain	I_C= -1A; V_{CE}= -4V	1000			
h_{FE-2}	DC Current Gain	I_C= -2A; V_{CE}= -4V	500			
C_{OB}	Output Capacitance	I_E= 0; V_{CB}= -10V, f= 0.1MHz			200	pF