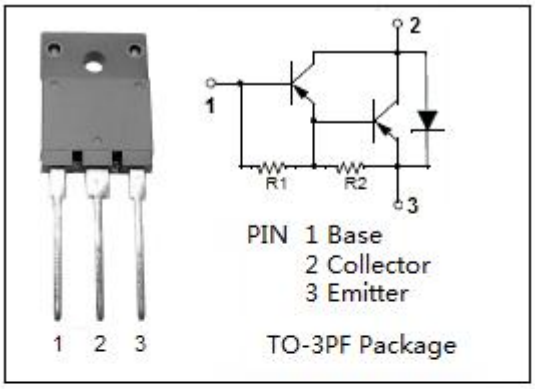
isc Silicon PNP Darlington Power Transistor TIP147F

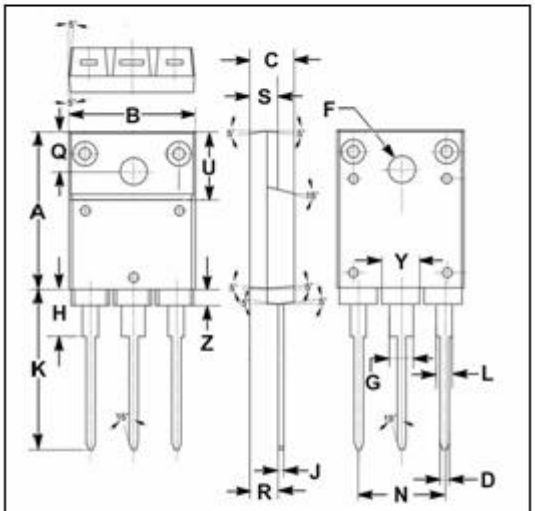
DESCRIPTION

- High DC Current Gain
- Monolithic construction with built in Base-Emitter shunt resistors
- Collector-Emitter Sustaining Voltage-
  : $V_{CEO(SUS)}$ = -100V(Min)
- Complement to Type TIP142F
- Minimum Lot-to-Lot variations for robust device performance and reliable operation



APPLICATIONS

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



DIM	mm MIN	mm MAX
A	19.90	20.10
B	15.75	16.10
C	5.50	5.70
D	0.90	1.10
F	3.30	3.50
G	2.90	3.20
H	5.90	6.10
J	0.595	0.70
K	21.10	22.50
L	1.90	2.25
N	10.80	11.00
Q	4.90	5.10
R	3.75	3.95
S	3.20	3.60
U	9.90	10.10
Y	4.20	4.90
Z	1.90	2.10

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

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	-10	A
I_{CM}	Collector Current-Peak	-15	A
I_B	Base Current- Continuous	-0.5	A
P_C	Collector Power Dissipation @T_C=25℃	60	W
T_j	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance, Junction to Case	1.56	℃/W

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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	-100			V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	I_C= -5A ,I_B= -10mA			-2.0	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	I_C= -10A ,I_B= -40mA			-3.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= -10A ,I_B= -40mA			-3.5	V
$V_{BE(on)}$	Base-Emitter On Voltage	I_C= -10A ; V_{CE}= -4V			-3.0	V
I_{CBO}	Collector Cutoff current	V_{CB}= -100V, I_E= 0			-1	mA
I_{CEO}	Collector Cutoff current	V_{CE}= -50V, I_B= 0			-2	mA
I_{EBO}	Emitter Cutoff Current	V_{EB}= -5V; I_C= 0			-2	mA
h_{FE-1}	DC Current Gain	I_C= -5A ; V_{CE}= -4V	1000			
h_{FE-2}	DC Current Gain	I_C= -10A ; V_{CE}= -4V	500			
Switching Times						
t_d	Delay Time	V_{CC}= -30 V, I_C= - 5.0 A, I_{B1}= -I_{B2} = -20 mA; t_p= 20 μ s Duty Cycle≤20%		0.15		μ s
t_r	Rise Time			0.55		μ s
t_{stg}	Storage Time			2.5		μ s
t_f	Fall Time			2.5		μ s

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