

isc Silicon NPN Darlington Power Transistor

TIP141F

DESCRIPTION

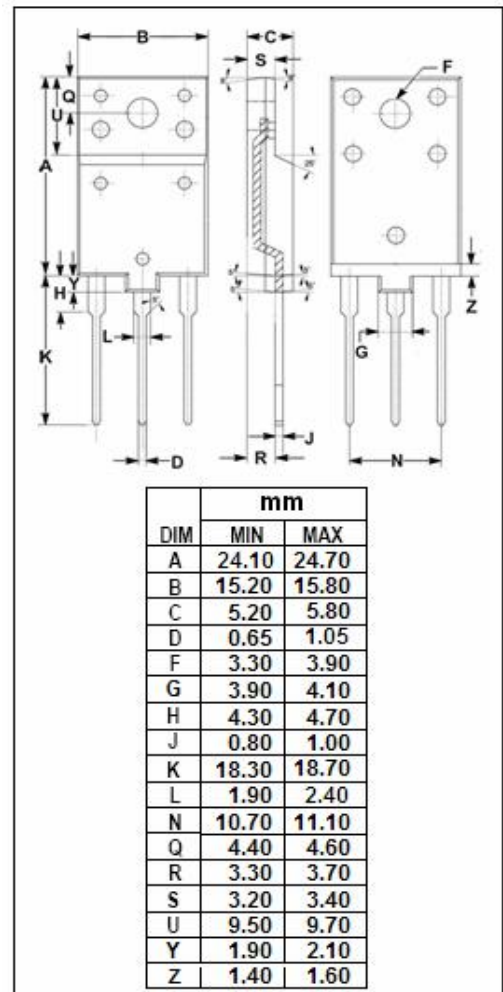
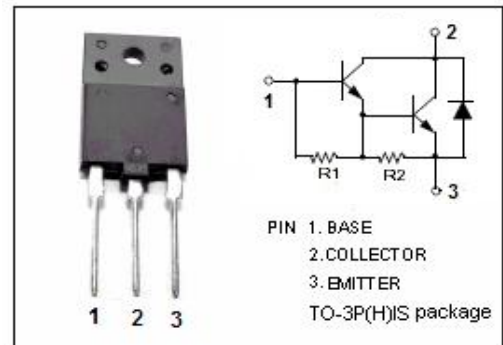
- High DC Current Gain-
: $h_{FE} = 1000(\text{Min}) @ I_C = 5A$
- Collector-Emitter Sustaining Voltage-
: $V_{CEO(\text{SUS})} = 80V(\text{Min})$
- Complement to Type TIP146F
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

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

ABSOLUTE MAXIMUM RATINGS($T_a=25^\circ\text{C}$)

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	10	A
I_{CM}	Collector Current-Peak	15	A
I_B	Base Current- Continuous	0.5	A
P_C	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	60	W
T_j	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-65~150	$^\circ\text{C}$



isc Silicon NPN Darlington Power Transistor**TIP141F****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	$I_C= 30\text{mA}, I_B= 0$	80			V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	$I_C= 5\text{A}, I_B= 10\text{mA}$			2.0	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	$I_C= 10\text{A}, I_B= 40\text{mA}$			3.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C= 10\text{A}, I_B= 40\text{mA}$			3.5	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C= 10\text{A}; V_{CE}= 4\text{V}$			3.0	V
I_{CBO}	Collector Cutoff current	$V_{CB}= 80\text{V}, I_E= 0$			1	mA
I_{CEO}	Collector Cutoff current	$V_{CE}= 40\text{V}, I_B= 0$			2	mA
I_{EBO}	Emitter Cutoff Current	$V_{EB}= 5\text{V}; I_C= 0$			2	mA
h_{FE-1}	DC Current Gain	$I_C= 5\text{A}; V_{CE}= 4\text{V}$	1000			
h_{FE-2}	DC Current Gain	$I_C= 10\text{A}; V_{CE}= 4\text{V}$	500			

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