

INCHANGE Semiconductor

isc Product Specification

isc Silicon PNP Darlington Power Transistor

TIP136

DESCRIPTION

- High DC Current Gain-
: $h_{FE} = 1000(\text{Min}) @ I_C = -4\text{A}$
- Collector-Emitter Sustaining Voltage-
: $V_{CEO(\text{SUS})} = -80\text{V}(\text{Min})$
- Low Collector-Emitter Saturation Voltage-
: $V_{CE(\text{sat})} = -2.0\text{V}(\text{Max}) @ I_C = -4\text{A}$
- Complement to Type TIP131

APPLICATIONS

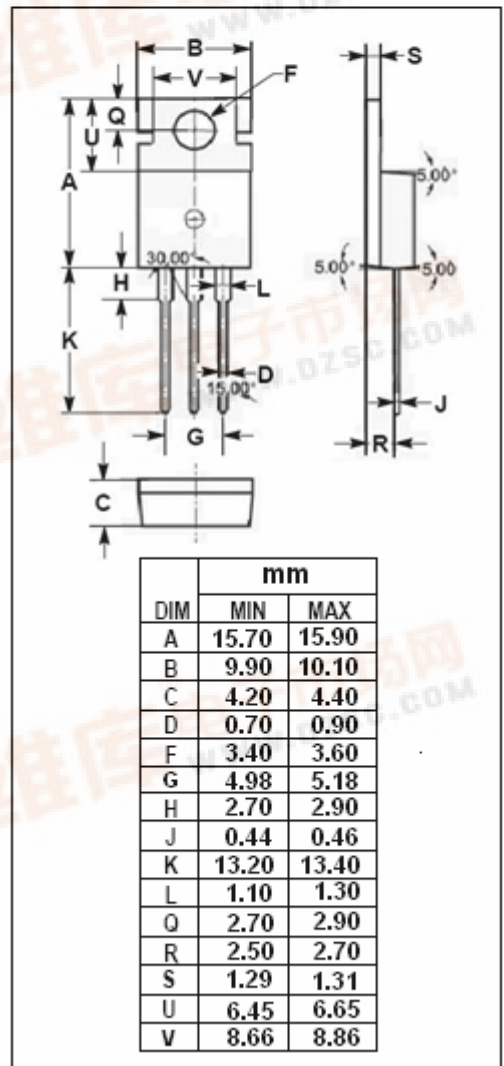
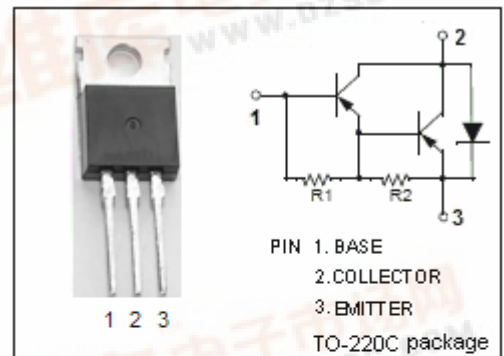
- Designed for general-purpose amplifier and low-speed switching applications

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	-8	A
I_{CM}	Collector Current-Peak	-12	A
I_B	Base Current- Continuous	-0.3	A
P_C	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	70	W
	Collector Power Dissipation @ $T_a=25^\circ\text{C}$	2	
T_j	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-65~150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{\text{th j-c}}$	Thermal Resistance, Junction to Case	1.785	$^\circ\text{C/W}$
$R_{\text{th j-a}}$	Thermal Resistance, Junction to Ambient	63.5	$^\circ\text{C/W}$



isc Silicon PNP Darlington Power Transistor**TIP136****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	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	$I_C = -4\text{A}$; $I_B = -16\text{mA}$		-2.0	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	$I_C = -6\text{A}$, $I_B = -30\text{mA}$		-3.0	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C = -4\text{A}$; $V_{CE} = -4\text{V}$		-2.5	V
I_{CBO}	Collector Cutoff Current	$V_{CB} = -80\text{V}$, $I_E = 0$		-0.2	mA
I_{CEO}	Collector Cutoff Current	$V_{CE} = -40\text{V}$, $I_B = 0$		-0.5	mA
I_{EBO}	Emitter Cutoff Current	$V_{EB} = -5\text{V}$; $I_C = 0$		-5	mA
h_{FE-1}	DC Current Gain	$I_C = -1\text{A}$; $V_{CE} = -4\text{V}$	500		
h_{FE-2}	DC Current Gain	$I_C = -4\text{A}$; $V_{CE} = -4\text{V}$	1000	15000	