

isc Silicon NPN Darlington Power Transistor

2SD463

DESCRIPTION

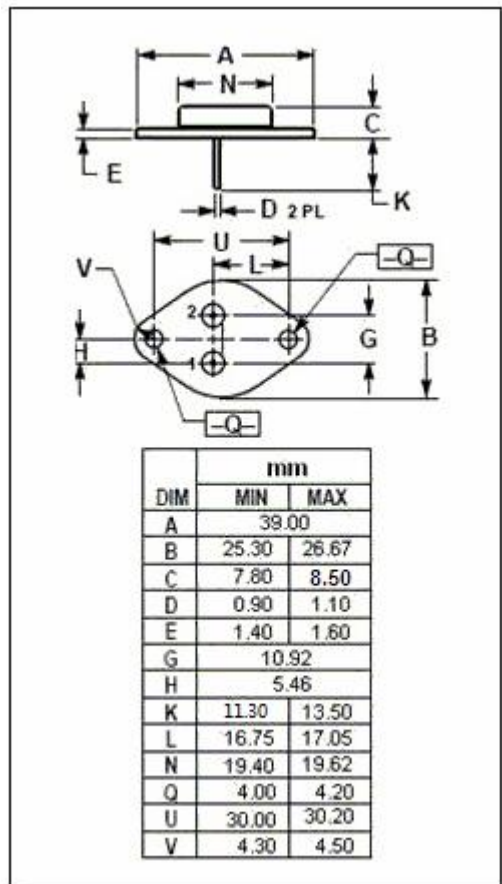
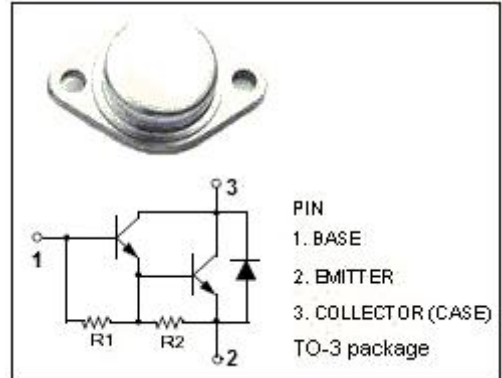
- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 80V(\text{Min})$
- High DC Current Gain
: $h_{FE} = 3000(\text{Min}) @ I_C = 5A$
- Low Saturation Voltage
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for general-purpose power amplifier and 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	7	A
I_{CP}	Collector Current-Peak	12	A
I_B	Base Current-Continuous	0.3	A
P_C	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	80	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**2SD463****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CE0(SUS)}$	Collector-Emitter Breakdown Voltage	$I_C=30\text{mA}; I_B=0$	80			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	$I_C=5\text{A}; I_B=50\text{mA}$			2.5	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C=3\text{A}; V_{CE}=5\text{V}$			2.5	V
I_{CBO}	Collector Cutoff Current	$V_{CB}=80\text{V}; I_E=0$			0.2	mA
I_{CEO}	Collector Cutoff Current	$V_{CE}=80\text{V}; I_B=0$			0.5	mA
I_{EBO}	Emitter Cutoff Current	$V_{EB}=5\text{V}; I_C=0$			5	mA
h_{FE-1}	DC Current Gain	$I_C=3\text{A}; V_{CE}=5\text{V}$	1500			
h_{FE-2}	DC Current Gain	$I_C=5\text{A}; V_{CE}=5\text{V}$	3000			

Switching times

t_{on}	Turn-on Time	$I_C=3\text{A}, I_{B1}=I_{B2}=12\text{mA}$			10	μs
t_{stg}	Storage Time				6.0	μs
t_f	Fall Time				10	μs

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