

isc Silicon PNP Darlington Power Transistor

ISCD127

DESCRIPTION

- High DC Current Gain-
: $h_{FE} = 1000(\text{Min}) @ I_C = -3A$
- Collector-Emitter Sustaining Voltage-
: $V_{CE(SUS)} = -100V(\text{Min})$
- Low Collector-Emitter Saturation Voltage-
: $V_{CE(sat)} = -2.0V(\text{Max}) @ I_C = -3A$
= $-4.0V(\text{Max}) @ I_C = -5A$
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

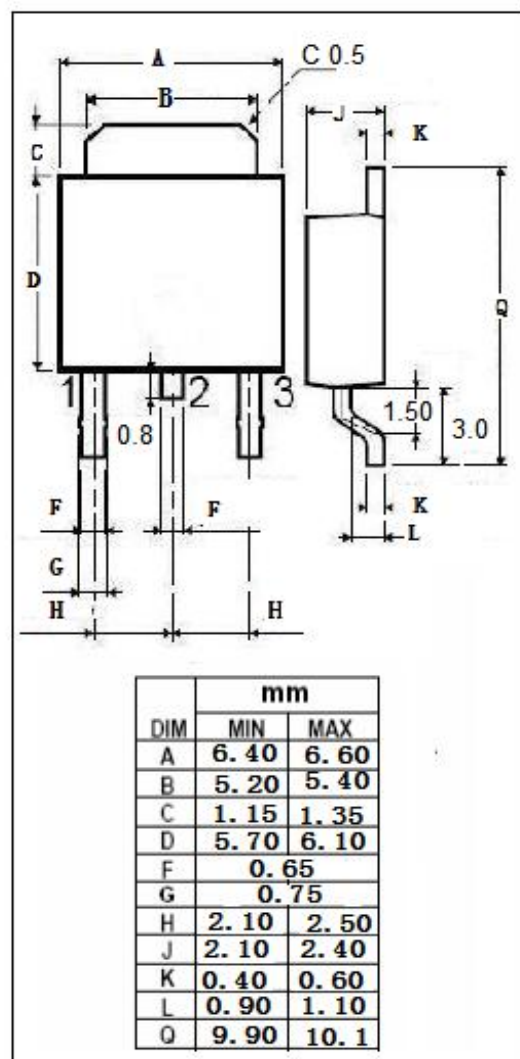
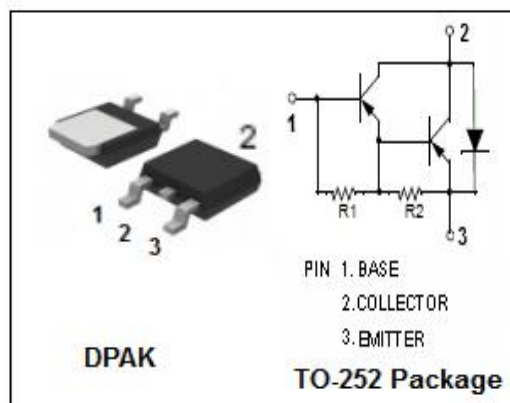
- Designed for general-purpose amplifier and low-speed switching applications

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	-100	V
V_{CEO}	Collector-Emitter Voltage	-100	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current-Continuous	-5	A
I_{CM}	Collector Current-Peak	-8	A
I_B	Base Current-DC	-120	mA
P_C	Collector Power Dissipation $T_C = 25^\circ\text{C}$	65	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
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	1.92	$^\circ\text{C/W}$



isc Silicon PNP Darlington Power Transistor**ISCD127****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	$I_C = -30\text{mA}$, $I_B = 0$	-100			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	$I_C = -5\text{A}$, $I_B = -20\text{mA}$			-4.0	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C = -3.0\text{A}$; $V_{CE} = -3\text{V}$			-2.5	V
I_{CBO}	Collector Cutoff Current	$V_{CB} = -100\text{V}$, $I_E = 0$			-0.2	mA
I_{CEO}	Collector Cutoff Current	$V_{CE} = -50\text{V}$, $I_B = 0$			-0.5	mA
I_{EBO}	Emitter Cutoff Current	$V_{EB} = -5\text{V}$; $I_C = 0$			-2	mA
h_{FE-1}	DC Current Gain	$I_C = -0.5\text{A}$; $V_{CE} = -3\text{V}$	1000			
h_{FE-2}	DC Current Gain	$I_C = -3.0\text{A}$; $V_{CE} = -3\text{V}$	1000			
C_{OB}	Output Capacitance	$I_E = 0$; $V_{CB} = -10\text{V}$, $f = 0.1\text{MHz}$			300	pF