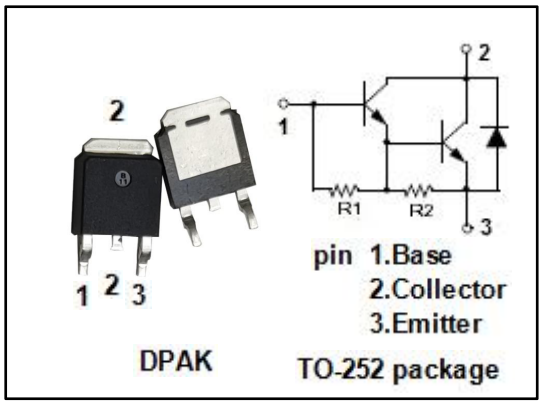
isc Silicon NPN Darlington Power Transistor MJD44E3

DESCRIPTION

- High DC Current Gain
  : h_{FE} = 1000(Min)@ I_C= 5A
- Low Collector-Emitter Saturation Voltage
  : $V_{CE(sat)}$ = 1.5V(Max)@ I_C= 5A
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

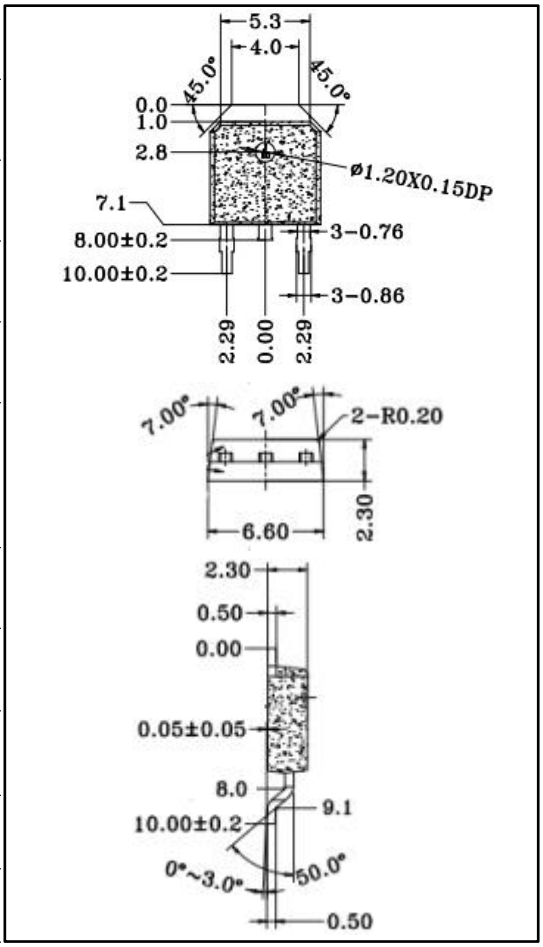


APPLICATIONS

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

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CEO}	Collector-Emitter Voltage	80	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	10	A
P_C	Collector Power Dissipation @T_C=25℃	20	W
	Collector Power Dissipation @T_a=25℃	1.75	
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	6.25	℃/W

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	I_C= 30mA; I_B= 0	80		V
$V_{CE(sat)-1}$	Collector-EmitterSaturation Voltage	I_C= 5A ;I_B= 10mA		1.5	V
$V_{CE(sat)-2}$	Collector-EmitterSaturation Voltage	I_C= 10A ;I_B= 20mA		1.5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= 5A ;I_B= 10mA		2.5	V
I_{CES}	Collector Cutoff Current	V_{CE}=Rated V_{CEO}; V_{BE}= 0		10	μA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 7.0V; I_C= 0		1.0	μA
h_{FE-1}	DC Current Gain	I_C= 5A ; V_{CE}= 5V	1000		