

isc Silicon NPN Power Transistor

NJD2873

DESCRIPTION

- Low Collector-Emitter Saturation Voltage-
: $V_{CE(sat)} = 0.3V(\text{Max})$ ($I_C = 1A$; $I_B = 50mA$)
- DC Current Gain $-h_{FE} = 120(\text{Min})$ @ $I_C = 0.5A$
- High Current-Gain—Bandwidth Product
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for high-gain audio amplifier applications.

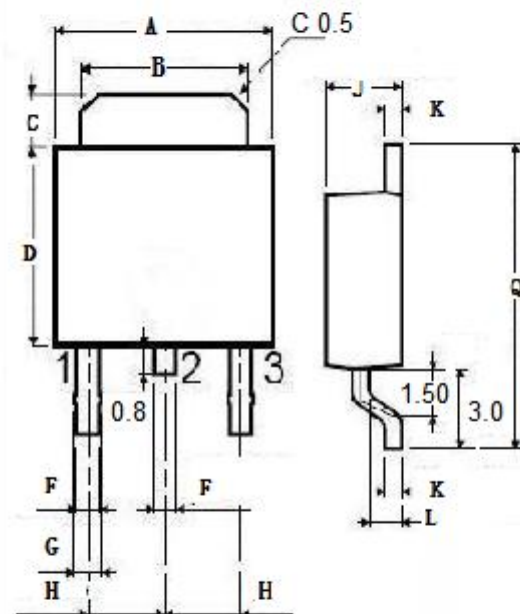
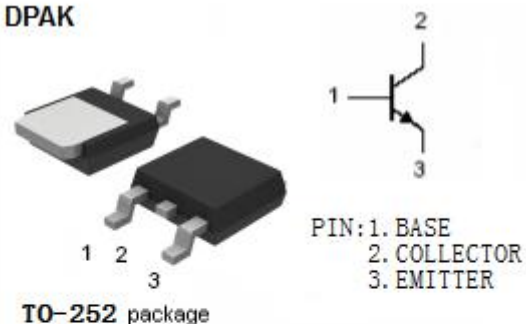
ABSOLUTE MAXIMUM RATINGS($T_a = 25^\circ\text{C}$)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	50	V
V_{CEO}	Collector-Emitter Voltage	50	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	2	A
I_{CM}	Collector Current-Peak	3	A
I_B	Base Current	0.4	A
P_C	Total Power Dissipation @ $T_C = 25^\circ\text{C}$	15	W
	Collector Power Dissipation $T_a = 25^\circ\text{C}$	1.68	
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-65~150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

$R_{th\ j-c}$	Thermal Resistance, Junction to Case	10	$^\circ\text{C/W}$
$R_{th\ j-a}$	Thermal Resistance, Junction to Ambient	89.3	$^\circ\text{C/W}$

DPAK



DIM	mm	
	MIN	MAX
A	6.40	6.60
B	5.20	5.40
C	1.15	1.35
D	5.70	6.10
F	0.65	
G	0.75	
H	2.10	2.50
J	2.10	2.40
K	0.40	0.60
L	0.90	1.10
Q	9.90	10.1

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ELECTRICAL CHARACTERISTICS

T_C=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
V _{(SUS)CEO}	Collector-Emitter Breakdown Voltage	I _C =10mA, I _B =0	50			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 1A; I _B = 50mA			0.3	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 1A; I _B = 50mA			1.2	V
V _{BE(on)}	Base-Emitter On Voltage	I _C = 1A ; V _{CE} = 2V			1.2	V
		I _C =0.75A; V _{CE} =1.6V@-40 °C ≤ T _J ≤ 150 °C			0.75	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 50V; I _E = 0			100	nA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 5V; I _C =0			100	nA
h _{FE}	DC Current Gain	I _C = 0.5A; V _{CE} = 2V	120		360	
		I _C = 2A; V _{CE} = 2V	40			
		I _C =0.75A; V _{CE} =1.6V@-40 °C ≤ T _J ≤ 150 °C	80		360	
f _T	Current-Gain—Bandwidth Product	I _C = 0.1A ; V _{CE} = 10V	65			MHZ
C _{OB}	Output Capacitance	V _{CB} =10V; f=0.1MHz		80		pF

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