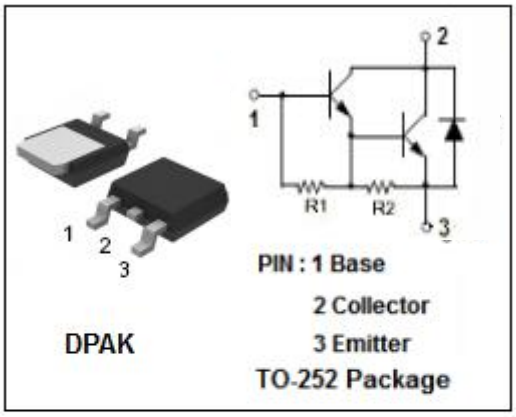
isc Silicon NPN Darlington Power Transistor 2SD1223

DESCRIPTION

- High DC Current Gain-
  : h_{FE} = 2000(Min)@ I_C= 4A
- Collector-Emitter Sustaining Voltage-
  : $V_{CEO(SUS)}$ = 80V(Min)
- Low Collector-Emitter Saturation Voltage-
  : $V_{CE(sat)}$ = 1.5V(Max)@ I_C= 3A
- Minimum Lot-to-Lot variations for robust device performance and reliable operation



APPLICATIONS

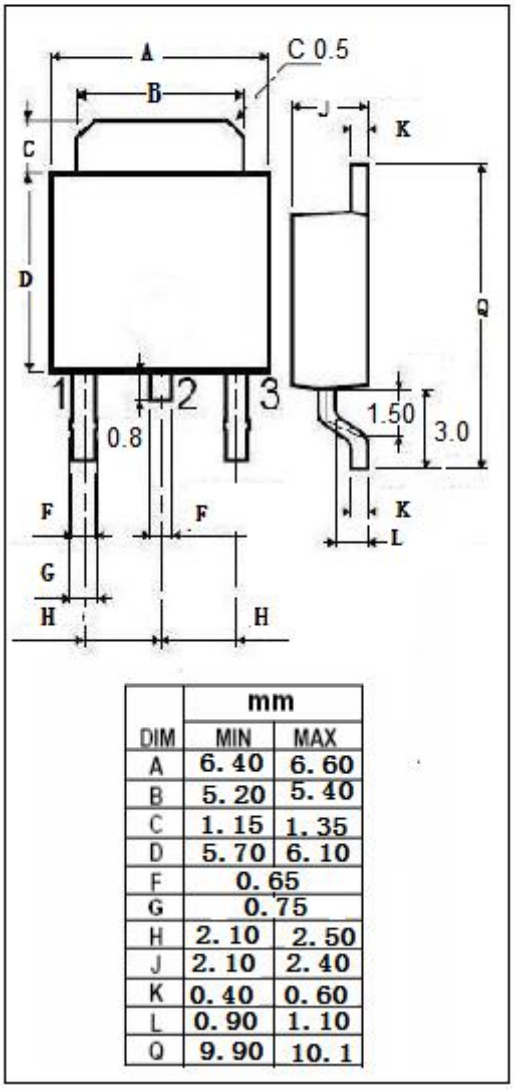
- Designed for general-purpose amplifier and low-speed switching applications

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	100	V
V_{CEO}	Collector-Emitter Voltage	80	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	4	A
I_B	Base Current	0.4	A
P_C	Collector Power Dissipation T_C=25℃	15	W
	Collector Power Dissipation T_a=25℃	1	
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	8.33	℃/W



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℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	I_C= 10mA, I_B= 0	80			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 3A ,I_B= 6mA			1.5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= 3A ,I_B= 6mA			2	V
I_{CBO}	Collector Cutoff Current	V_{CB}= 100V, I_E= 0			20	uA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 5V; I_C= 0			2.5	mA
h_{FE-1}	DC Current Gain	I_C= 1A; V_{CE}= 2V	2000			
h_{FE-2}	DC Current Gain	I_C= 3.0A; V_{CE}= 2V	1000			