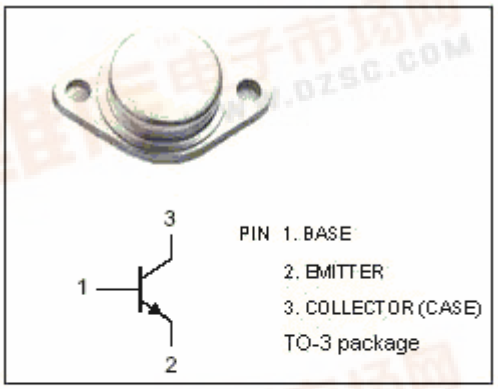
isc Silicon NPN Power Transistor MJ12003

DESCRIPTION

- Collector-Emitter Sustaining Voltage-
  : $V_{CEO(SUS)}$ = 750V(Min)
- High Switching Speed
- Wide Area of Safe Operation



APPLICATIONS

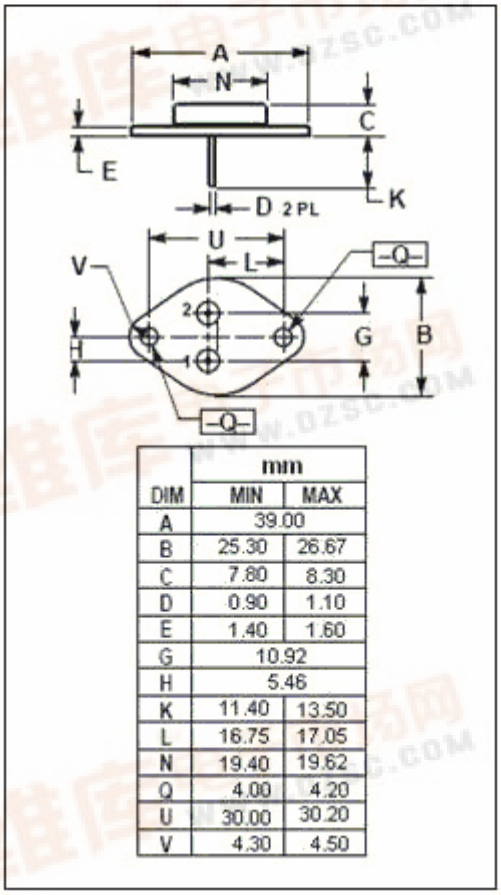
- Designed for use in CRT deflection circuits.

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CEX}	Collector-Emitter Voltage	1500	V
$V_{CEO(SUS)}$	Collector-Emitter Voltage	750	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	4	A
I_B	Base Current-Continuous	3	A
I_E	Emitter Current-Continuous	7	A
P_C	Collector Power Dissipation@T_C=25℃	100	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-65~150	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	1.25	℃/W



DIM	mm MIN	MAX
A	39.00	
B	25.30	26.67
C	7.80	8.30
D	0.90	1.10
E	1.40	1.60
G	10.92	
H	5.46	
K	11.40	13.50
L	16.75	17.05
N	19.40	19.62
Q	4.00	4.20
U	30.00	30.20
V	4.30	4.50

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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=50mA ; I_B=0	750			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 3A; I_B= 1.2A			5.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= 3A; I_B= 1.2A			1.5	V
I_{CES}	Collector Cutoff Current	V_{CE}= 1500V; V_{BE}= 0			1.0	mA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 5V; I_C=0			1.0	mA
h_{FE}	DC Current Gain	I_C= 0.5A ; V_{CE}= 5V	6			
f_T	Current-Gain—Bandwidth Product	I_C= 0.1A; V_{CE}= 5V; f_{test}=1.0MHz		4		MHz
C_{OB}	Output Capacitance	I_E= 0; V_{CB}= 10V; f_{test}=0.1MHz		90		pF
t_f	Fall Time	I_C= 3A , I_{B1}= 1.2A; L_B= 8μH		0.5	1.0	μs