

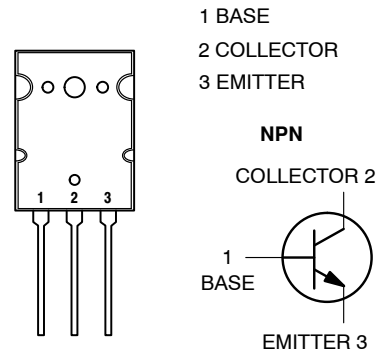
Silicon NPN Power Transistor

MJL21194A

TO-3PL

DESCRIPTION

- High Collector-Emitter Breakdown Voltage-
: $V(BR)_{CEO} = 250V(\text{Min})$
High DC Current Gain – $h_{FE} = 25 \text{ Min @ } I_C = 8 \text{ Adc}$
- Complement to Type MJL21193
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

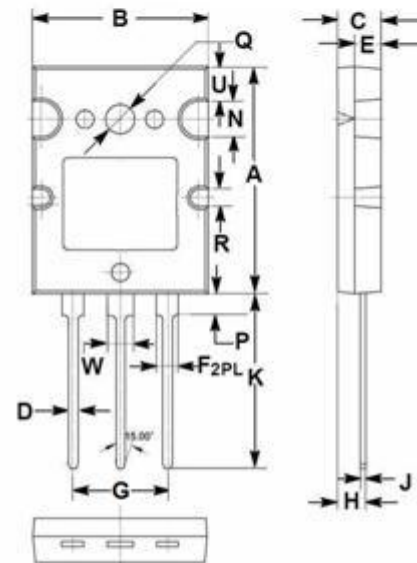


APPLICATIONS

Perforated Emitter technology
high power audio output, disk head positioners
linear applications

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	400	V
V_{CEO}	Collector-Emitter Voltage	250	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	16	A
I_B	Base Current-Continuous	5	A
P_C	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	200	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$



DIM	mm	
	MIN	MAX
A	25.50	26.50
B	19.80	20.20
C	4.50	5.50
D	0.90	1.10
E	2.80	3.20
F	2.40	2.60
G	10.80	11.00
H	3.10	3.30
J	0.50	0.70
K	20.00	21.00
N	3.90	4.50
P	2.40	2.60
Q	3.10	3.50
R	1.90	2.60
U	3.90	4.10
W	2.90	3.25



Certificate Number: Q10561



Certificate Number: E17276

ELECTRICAL CHARACTERISTICS

$T_c=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C=50\text{mA}; I_B=0$	250		V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	$I_C=8.0\text{A}; I_B=0.8\text{A}$		1.4	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	$I_C=-16\text{A}; I_B=-3.2\text{A}$		4.0	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C=8\text{A}; V_{CE}=5\text{V}$		2.2	V
I_{CEO}	Collector Cutoff Current	$V_{CE}=200\text{V}; I_E=0$		100	μA
I_{EBO}	Emitter Cutoff Current	$V_{EB}=5\text{V}; I_C=0$		100	μA
h_{FE-1}	DC Current Gain	$I_C=8\text{A}; V_{CE}=5\text{V}$	25	75	
h_{FE-2}	DC Current Gain	$I_C=16\text{A}; V_{CE}=5\text{V}$	8		
C_{OB}	Output Capacitance	$I_E=0; V_{CB}=10\text{V}; f=1.0\text{MHz}$		600	pF
f_T	Current-Gain—Bandwidth Product	$I_C=1\text{A}; V_{CE}=5\text{V}$	10		MHz

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