

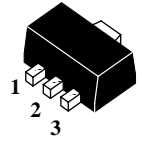
NPN EPITAXIAL PLANAR TRANSISTOR

 Lead(Pb)-Free

Features:

- * Low saturation voltage, typically $V_{CE(sat)} = 0.35V$ at $I_C/I_B = 1A/50mA$.
- * Excellent DC current gain characteristics.

1. BASE
2. COLLECTOR
3. EMITTER



SOT-89

Mechanical Data:

- * Case : Molded Plastic

ABSOLUTE MAXIMUM RATINGS($T_A = 25^\circ C$ Unless Otherwise Noted)

Rating	Symbol	Value	Unit
Collector to Base Voltage	V_{CBO}	60	V
Collector to Emitter Voltage	V_{CEO}	50	V
Collector to Base Voltage	V_{EBO}	6	V
Collector Current (DC)	I_C	2.0	A
Total Device Dissipation $T_A = 25^\circ C$	P_D	2	W
Junction Temperature	T_j	+150	$^\circ C$
Storage Temperature	T_{stg}	-55 to +150	$^\circ C$

ELECTRICAL CHARACTERISTICS

Characteristics	Symbol	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage $I_C=50\mu A, I_E=0$	BV_{CBO}	60	-	-	V
Collector-Emitter Breakdown Voltage $I_C=1mA, I_B=0$	BV_{CEO}	50	-	-	V
Emitter-Base Breakdown Voltage $I_E=50\mu A, I_C=0$	BV_{EBO}	6.0	-	-	V
Collector Cut-Off Current $V_{CB}=60V, I_E=0$	I_{CBO}	-	-	0.1	μA
Emitter-Cut-Off Current $V_{EB}=5V, I_C=0$	I_{EBO}	-	-	0.1	μA

ON CHARACTERISTICS*

DC Current Gain $V_{CE}=2V, I_C=500mA$	h_{FE}	82	-	270	-
Collector-Emitter Saturation Voltage $I_C=1A, I_B=50mA$	$V_{CE(sat)}$	-	-	0.35	V

*Pulse Test: Pluse Width $\leq 380\mu s$, Duty Cycle $\leq 2\%$.

DYNAMIC CHARACTERISTICS

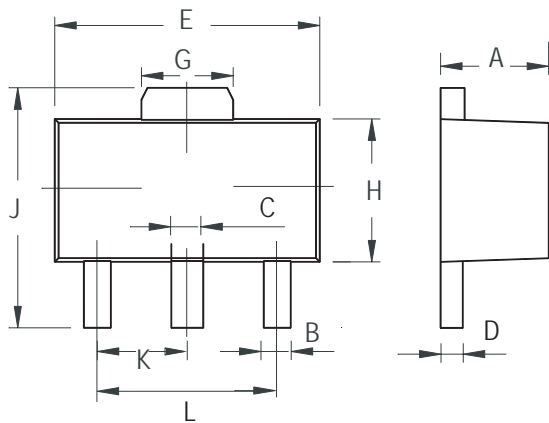
Transition Frequency $V_{CE}=2V, I_E=500mA, f=100MHz$	f_T	-	210	-	MHz
Output Capacitance $V_{CB}=10V, I_E=0, f=1MHz$	C_{ob}	-	25	-	pF

CLASSIFICATION OF h_{FE}

Rank	P	Q
Range	82-180	120-270
Marking	DKP	DKQ

SOT-89 Outline Dimensions

unit:mm



SOT-89		
Dim	Min	Max
A	1.400	1.600
B	0.320	0.520
C	0.360	0.560
D	0.350	0.440
E	4.400	4.600
G	1.400	1.800
H	2.300	2.600
J	3.940	4.250
K	1.500TYP	
L	2.900	3.100