

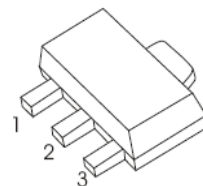
NPN Epitaxial Planar Silicon Transistors

FEATURES

- Fast switching speed.
- Low collector-to-emitter saturation voltage.
- Large current capacity and wide ASO.

SOT-89-3L

1. BASE
2. COLLECTOR
3. EMITTER



ORDERING INFORMATION

Type No.	Marking	Package Code
2SD1624□	DG	SOT-89

□: none is for Lead Free package;
“G” is for Halogen Free package.

MAXIMUM RATING @ Ta=25°C unless otherwise specified

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	60	V
V_{CEO}	Collector-Emitter Voltage	50	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current –DC –Pulse	3 6	A
P_C	Collector Dissipation	0.5 1.5(Note1)	W
T_j, T_{stg}	Junction and Storage Temperature	-55 to+150	°C

Note

1. Mounted on ceramic board (250mm²×0.8mm)

ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=10\mu A$ $I_E=0$	60			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1mA$ $I_B=0$	50			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=10\mu A$ $I_C=0$	6			V
Collector cut-off current	I_{CBO}	$V_{CB}=40V$ $I_E=0$			1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=4V$, $I_C=0$			1	μA
DC current gain	h_{FE}	$V_{CE}=2V$ $I_C=100mA$ $V_{CE}=2V$ $I_C=3A$	100 35		560	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=2A$ $I_B=100mA$		0.35	0.7	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=2A$ $I_B=100mA$		0.94	1.2	V
Transition frequency	f_T	$V_{CE}=10V$, $I_C=50mA$,		150		MHz
Output Capacitance	C_{ob}	$V_{CB}=10V$ $f=1.0MHz$ $I_E=0$		39		pF

CLASSIFICATION OF h_{FE}

Rank	R	S	T	U
Range	100-200	140-280	200-400	280-560

TYPICAL CHARACTERISTICS @ $T_a=25^\circ\text{C}$ unless otherwise specified

