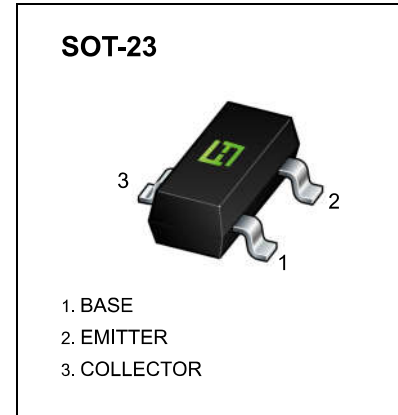


FEATURES

- This device is designed for applications requiring extremely high current gain at collector currents to 1.0 A.

MARKING: 1M



MAXIMUM RATINGS ($T_a=25^\circ\text{C}$ unless otherwise noted)

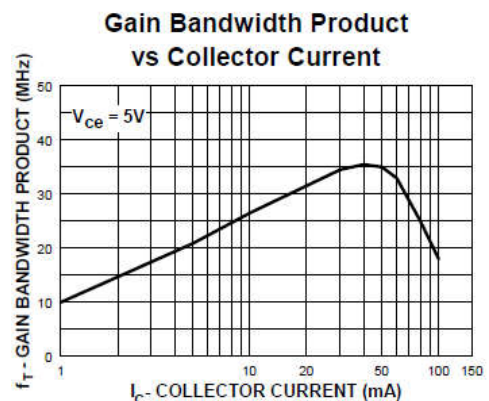
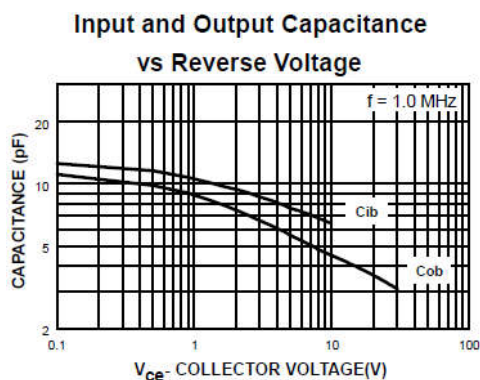
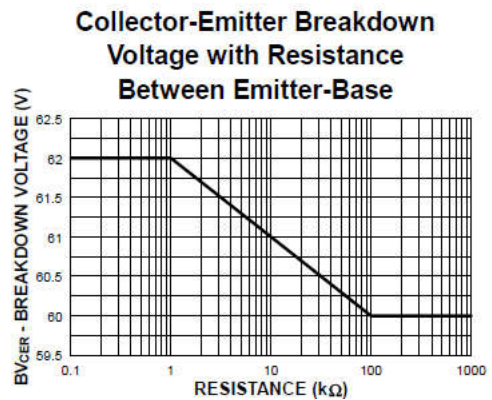
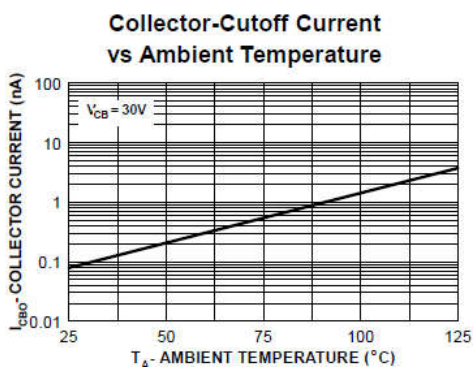
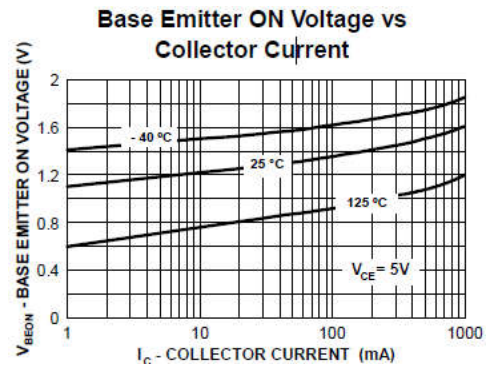
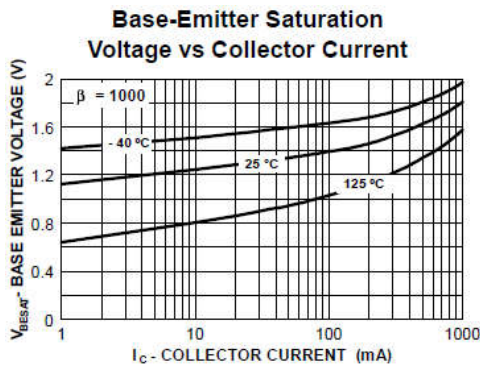
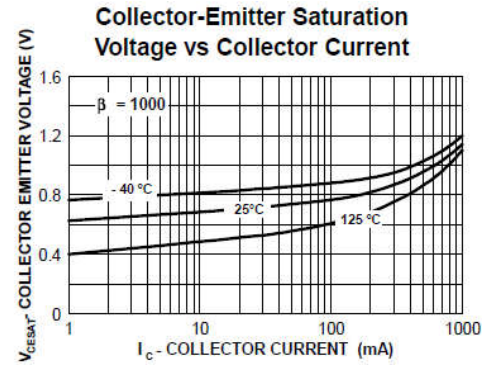
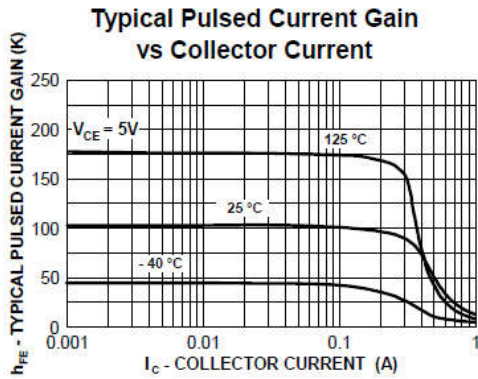
Parameter	Symbol	Value	Unit
Collector-Base Voltage	BV_{CBO}	30	V
Collector-Emitter Voltage	BV_{CES}	30	V
Emitter-Base Voltage	BV_{EBO}	10	V
Collector Current	I_C	1.0	A
Collector Power Dissipation	P_C	625	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55~+150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$ unless otherwise specified)

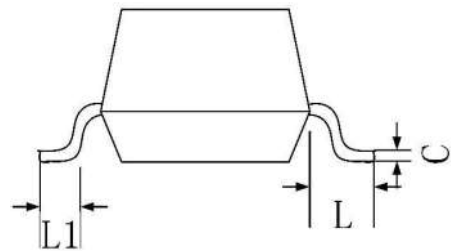
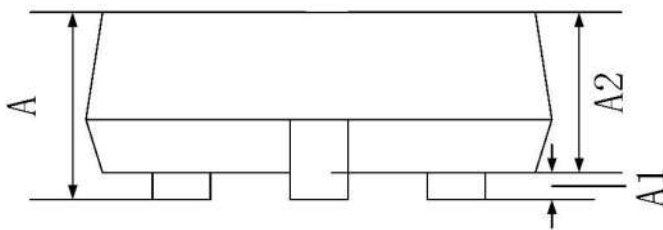
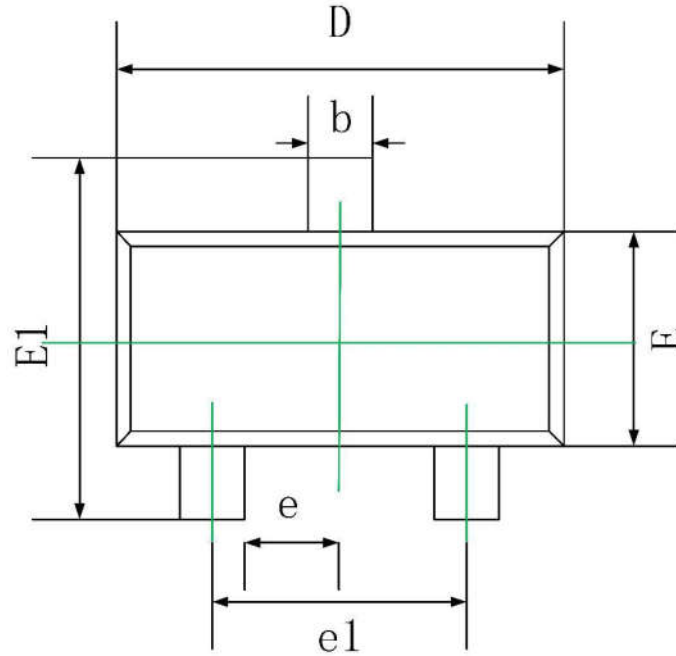
Parameter	Symbol	Conditions	Value			Unit
			Min	Typ	Max	
Collector-base breakdown voltage	BV_{CBO}	$I_C = 100\mu\text{A}$, $I_E = 0$	30			V
Collector cut-off current	I_{CBO}	$V_{CB} = 30\text{V}$, $I_E = 0$			100	nA
Emitter cut-off current	I_{EBO}	$V_{EB} = 10\text{V}$, $I_C = 0$			100	nA
DC current gain *	h_{FE}	$V_{CE} = 5\text{V}$, $I_C = 10\text{mA}$ $V_{CE} = 5\text{V}$, $I_C = 100\text{mA}$	10000 20000			
Collector-emitter saturation voltage *	V_{CESAT}	$I_C = 100\text{mA}$, $I_B = 0.1\text{mA}$			1.5	V
base -emitter saturation voltage *	$V_{BE(ON)}$	$V_{CE} = 5\text{V}$, $I_C = 100\text{mA}$			2.0	V
Transition frequency	f_T	$V_{CE} = 5\text{V}$, $I_B = 10\text{mA}$	125			MHz

*Pulse Test: Pulse Width $\leq 300\mu\text{s}$, Duty Cycle $\leq 2.0\%$

Typical Characteristics



SOT-23 Package Information



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP.		0.037 TYP.	
e1	1.800	2.000	0.071	0.079
L	0.550 REF.		0.022 REF.	
L1	0.300	0.500	0.012	0.020

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