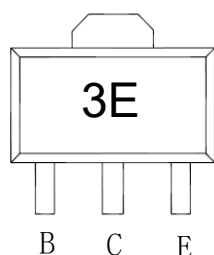
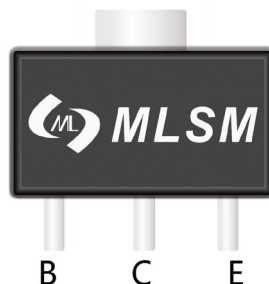


Features

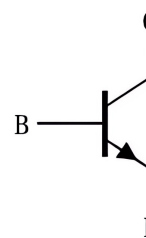
- High-Speed Switching Applications
- DC-DC Converter Applications
- Strobe Applications



Marking and pin assignment



SOT-89-3L top view



Schematic diagram



Halogen-Free

Maximum Ratings (Ta=25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	20	V
V_{CEO}	Collector-Emitter Voltage	10	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current	2	A
I_{CP}	Collector Current –Pulse	3.5	A
I_B	Base Current	0.2	A
P_C	Collector Power Dissipation	0.5	W
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	250	°C/W
T_J, T_{stg}	Operation Junction and Storage Temperature Range	-55~+150	°C

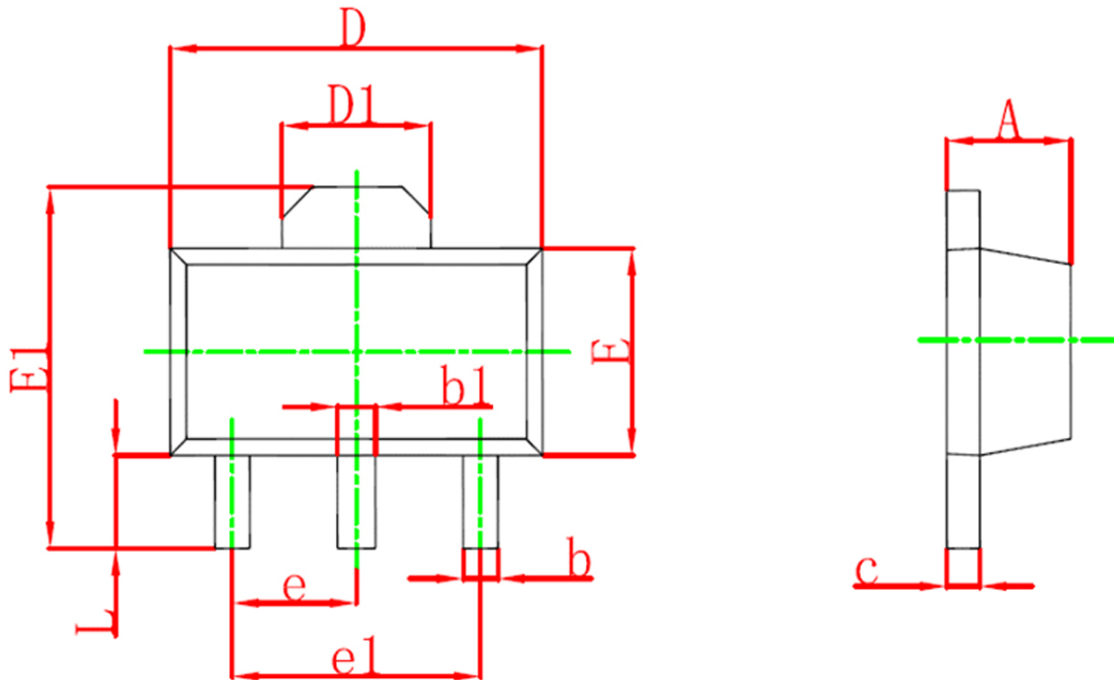
Ordering Information (Example)

Type	Package	Marking	Minimum Package(pcs)	Inner Box Quantity(pcs)	Outer Carton Quantity(pcs)	Delivery Mode
2SC5785	SOT-89-3L	3E	1,000	10,000	40,000	7"reel

Electrical Characteristics (Ta=25°C unless otherwise specified)

Symbol	Parameter	Condition	Min	Typ	Max	Unit
$V_{(BR)CBO}$	Collector-base breakdown voltage	$I_C=1mA, I_E=0$	20	--	--	V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C=10mA, I_B=0$	10	--	--	V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E=1mA, I_C=0$	7	--	--	V
I_{CBO}	Collector cut-off current	$V_{CB}=20V, I_E=0$	--	--	0.1	μA
I_{EBO}	Emitter cut-off current	$V_{EB}=7V, I_C=0$	--	--	0.1	μA
H_{FE1}	DC current gain	$V_{CE}=2V, I_C=0.2A$	400	--	1000	
H_{FE2}		$V_{CE}=2V, I_C=0.6A$	200	--	--	
$V_{CE(sat)}$	Collector-emitter saturation voltage	$I_C=0.6A, I_B=12mA$	--	--	0.12	V
$V_{BE(sat)}$	Base-emitter saturation voltage	$I_C=0.6A, I_B=12mA$	--	--	1.1	V
t_r	Rise time	See Figure 1 circuit diagram. $V_{CC} \approx 6V, R_L=10\Omega,$ $I_{B1}=-I_{B2}=12mA$	--	60	--	ns
t_s	Storage time		--	215	--	ns
t_f	Fall time		--	25	--	ns

SOT-89-3L Package information



Symbol	Dimensions in Millimeters(mm)		Dimensions in Inches	
	Min	Max	Min	Max
A	1.400	1.600	0.055	0.063
b	0.320	0.520	0.013	0.020
b1	0.400	0.580	0.016	0.023
c	0.350	0.440	0.014	0.017
D	4.400	4.600	0.173	0.181
D1	1.550 REF		0.061 REF	
E	2.300	2.600	0.091	0.102
E1	3.940	4.250	0.155	0.167
e	1.500 TYP		0.060 TYP	
e1	3.000 TYP		0.118 TYP	
L	0.900	1.200	0.035	0.047