

Features

- Low $V_{CE(sat)}$. $V_{CE(sat)}=0.16V(Typ.)(I_C/I_B=2A/0.2A)$
- Complements to 2SB1188



SOT-89-3L

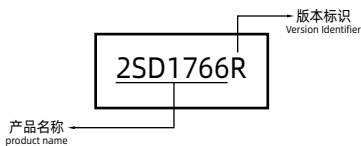
Absolute Maximum Ratings($T_A=25^{\circ}C$)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	40	V
V_{CEO}	Collector-Emitter Voltage	32	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current	2	A
P_C	Collector Power Dissipation	500	mW
T_J, T_{stg}	Operation Junction And Storage Temperature Range	-55 ~ +150	$^{\circ}C$

Electrical Characteristics ($T_A=25^{\circ}C$ unless otherwise specified)

Symbol	Parameter	Test conditions	Min	Typ	Max	Unit
$V_{(BR)CBO}$	Collector-base breakdown voltage	$I_C=50\mu A, I_E=0$	40			V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C=1mA, I_B=0$	32			V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E=50\mu A, I_C=0$	5			V
I_{CBO}	Collector cut-off current	$V_{CB}=20V, I_E=0$			1	μA
I_{EBO}	Emitter cut-off current	$V_{EB}=4V, I_C=0$			1	μA
h_{FE}	DC current gain	$V_{CE}=3V, I_C=500mA$	82		390	
$V_{CE(sat)}$	Collector-emitter saturation voltage	$I_C=2A, I_B=0.2A$			0.8	V
f_T	Transition frequency	$V_{CE}=5V, I_C=50mA, f=100MHz$		100		MHz
C_{ob}	Collector output capacitance	$V_{CB}=10V, I_E=0, f=1MHz$		30		pF

Ordering information

Product ID	Pack	Naming rule	Marking	$h_{FE}(1)$	Qty(PCS)
2SD1766R	SOT-89-3L		DBQ	120-270	1000
2SD1766R			DBR	180-390	



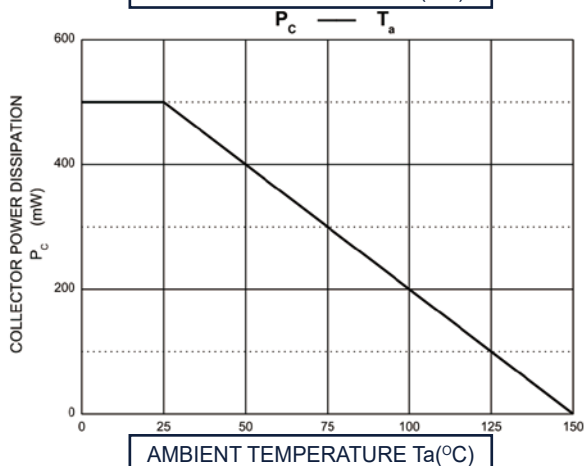
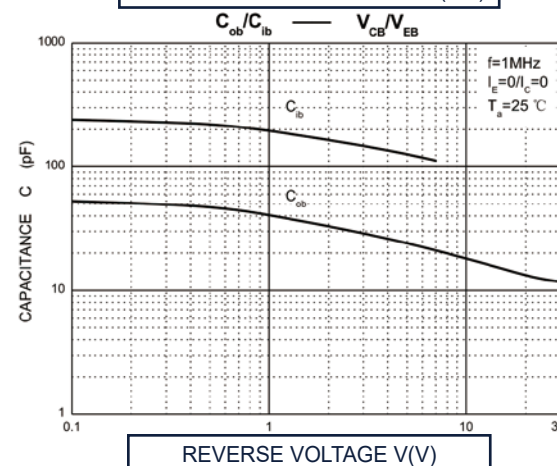
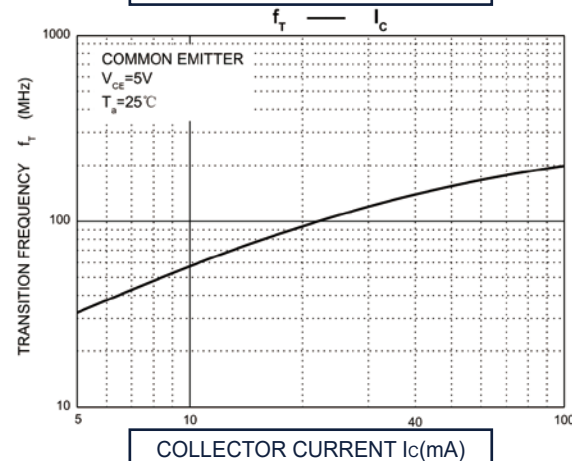
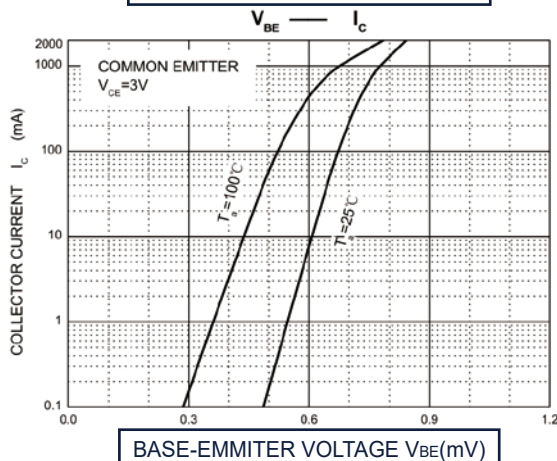
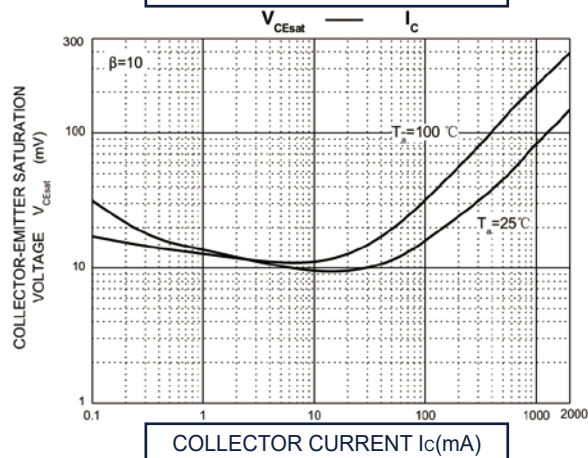
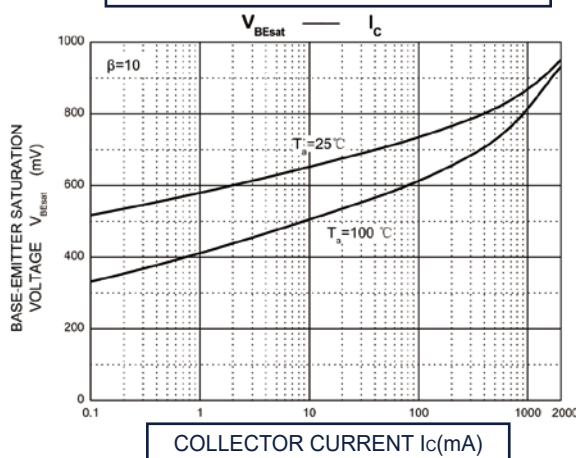
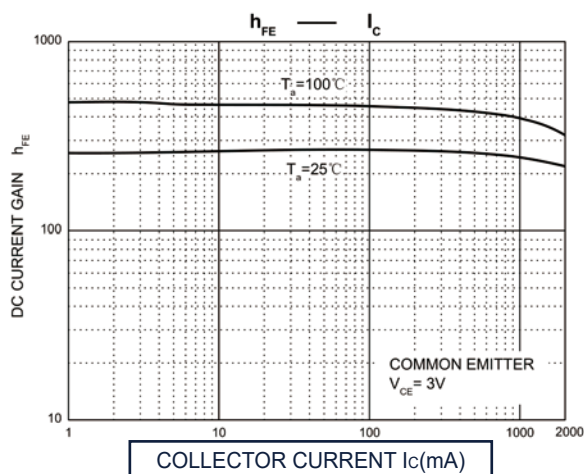
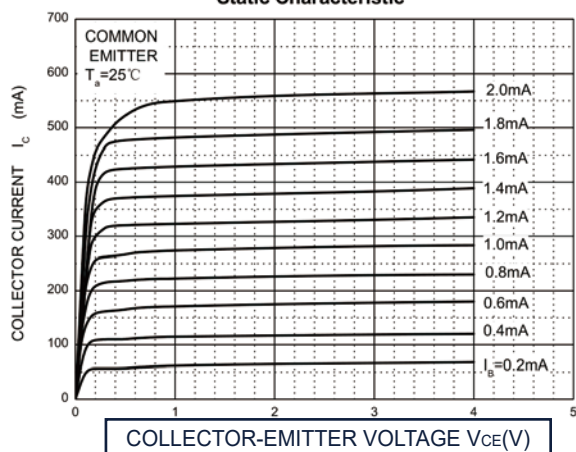
TWTLSEMI

TL-2SD1766R

SOT-89-3L Plastic-Encapsulate Transistors (NPN)

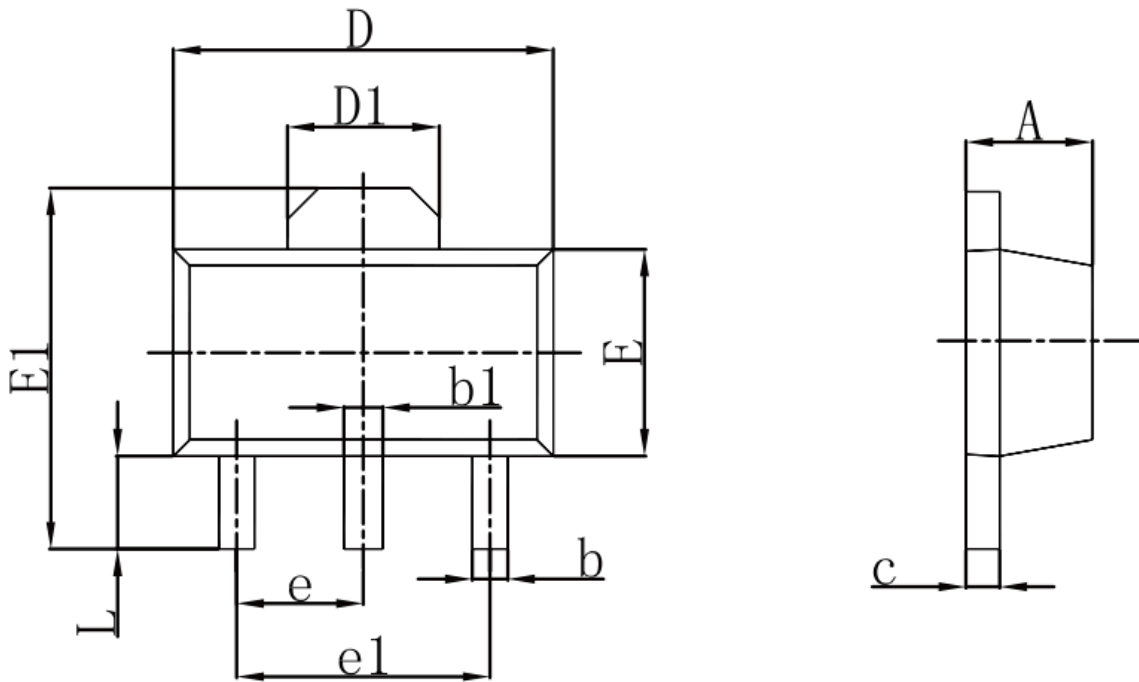
Typical Characteristics

Static Characteristic





SOT-89-3L Package Outline Dimensions



Symbol	Dimensions in Millimeters		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