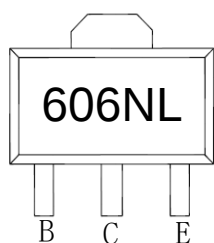


Features

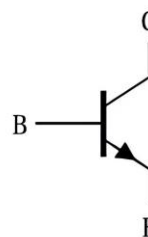
- Low Saturation Voltage
- High Speed Switching



Marking and pin assignment



SOT-89-3L top view



Schematic diagram



Halogen-Free

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

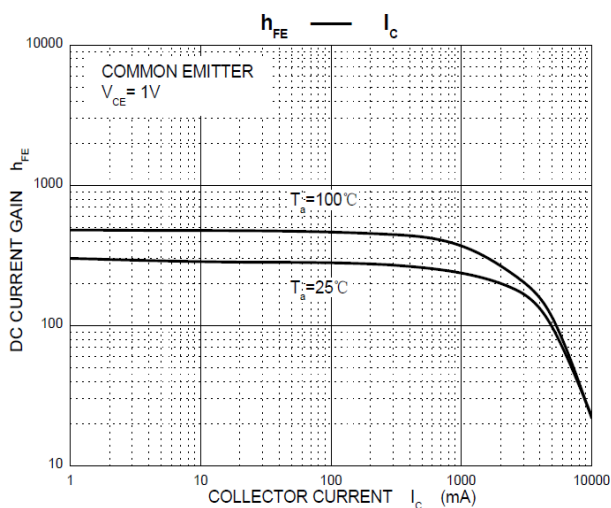
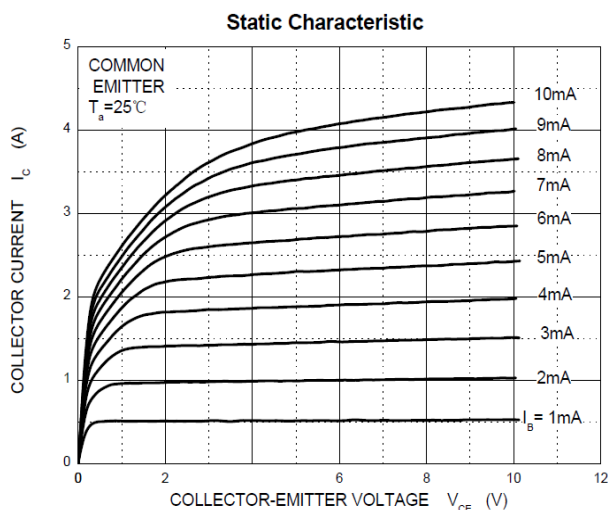
Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	150	V
V_{CEO}	Collector-Emitter Voltage	60	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current	6	A
$P_D^{①}$	Power Dissipation	1.5	W
$R_{\theta JA}^{①}$	Thermal Resistance From Junction To Ambient	83.3	°C/W
T_J, T_{stg}	Operation Junction and Storage Temperature Range	-55~+150	°C

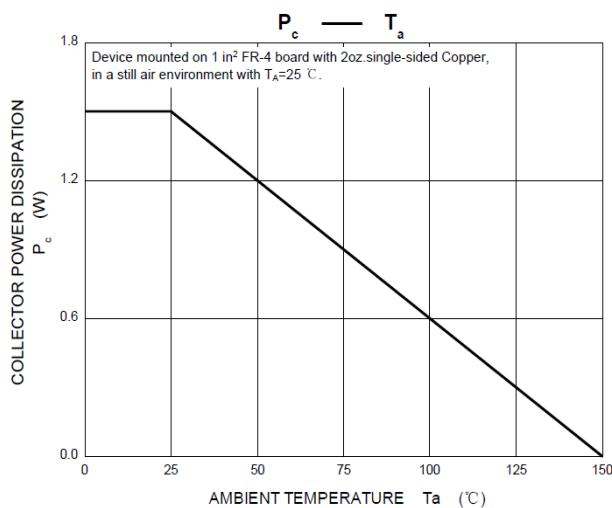
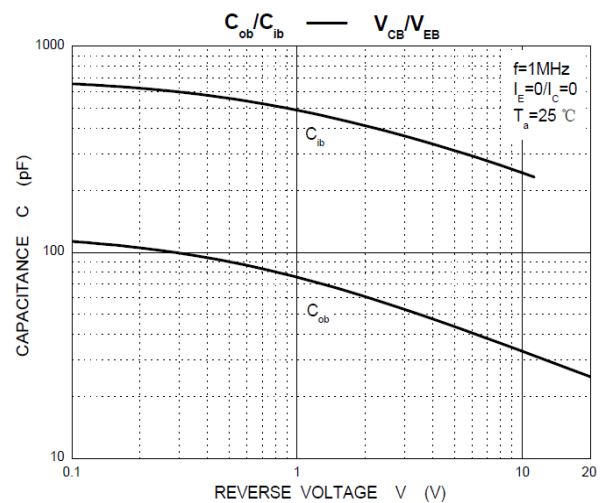
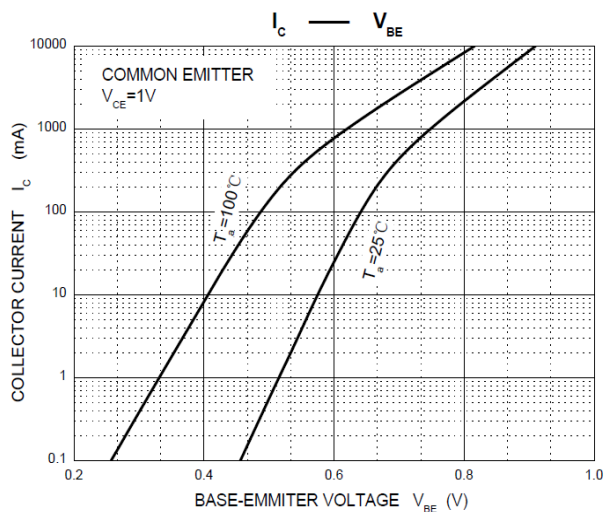
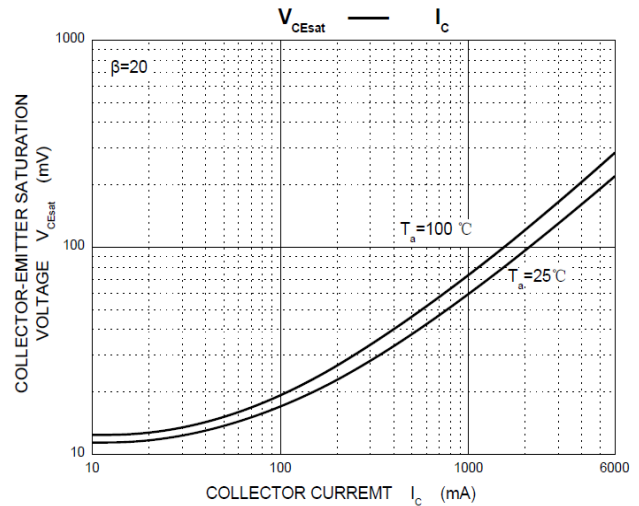
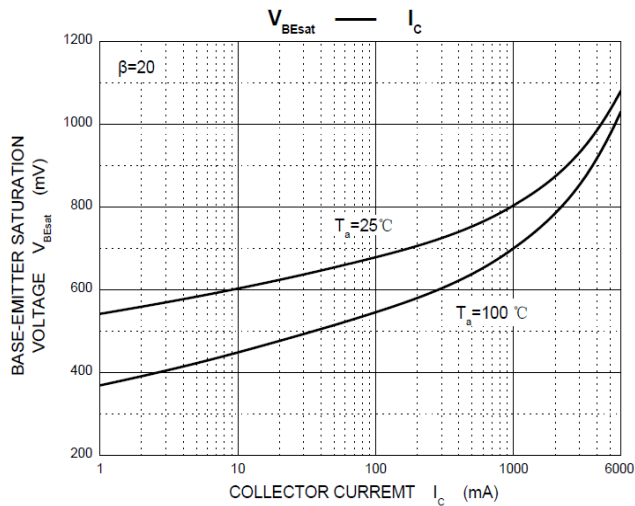
Ordering Information (Example)

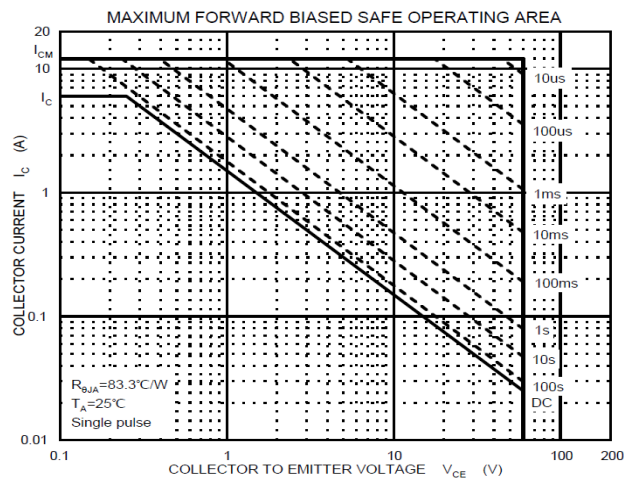
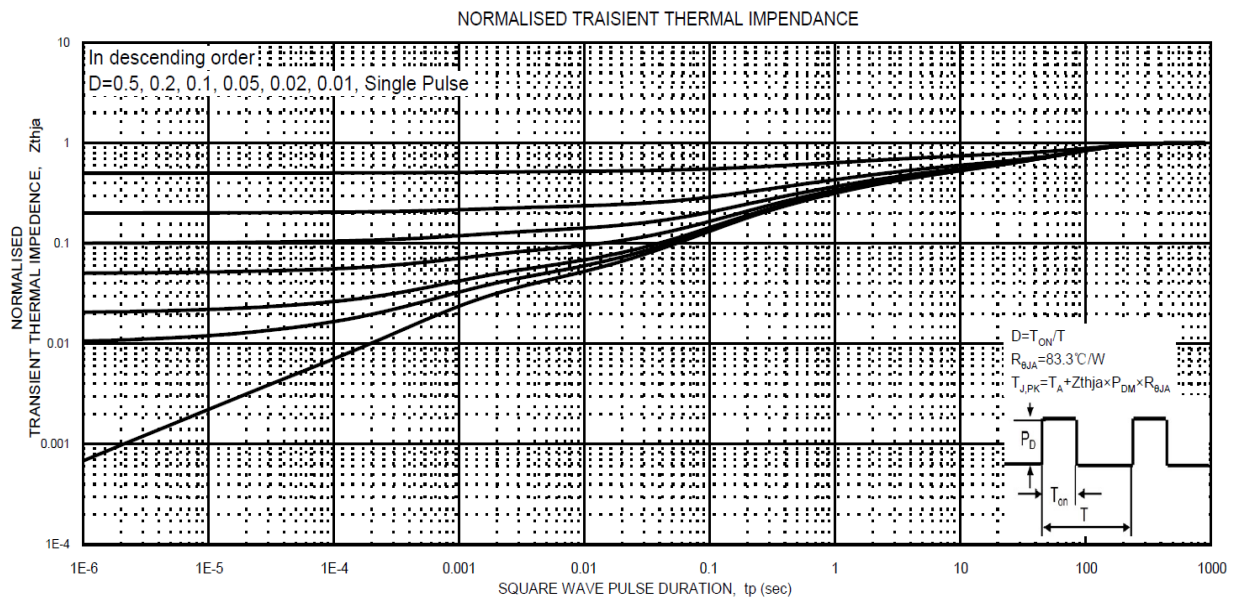
Type	Package	Marking	Minimum Package(pcs)	Inner Box Quantity(pcs)	Outer Carton Quantity(pcs)	Delivery Mode
MLSA606NL	SOT-89-3L	606NL	1,000	10,000	40,000	7"reel

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

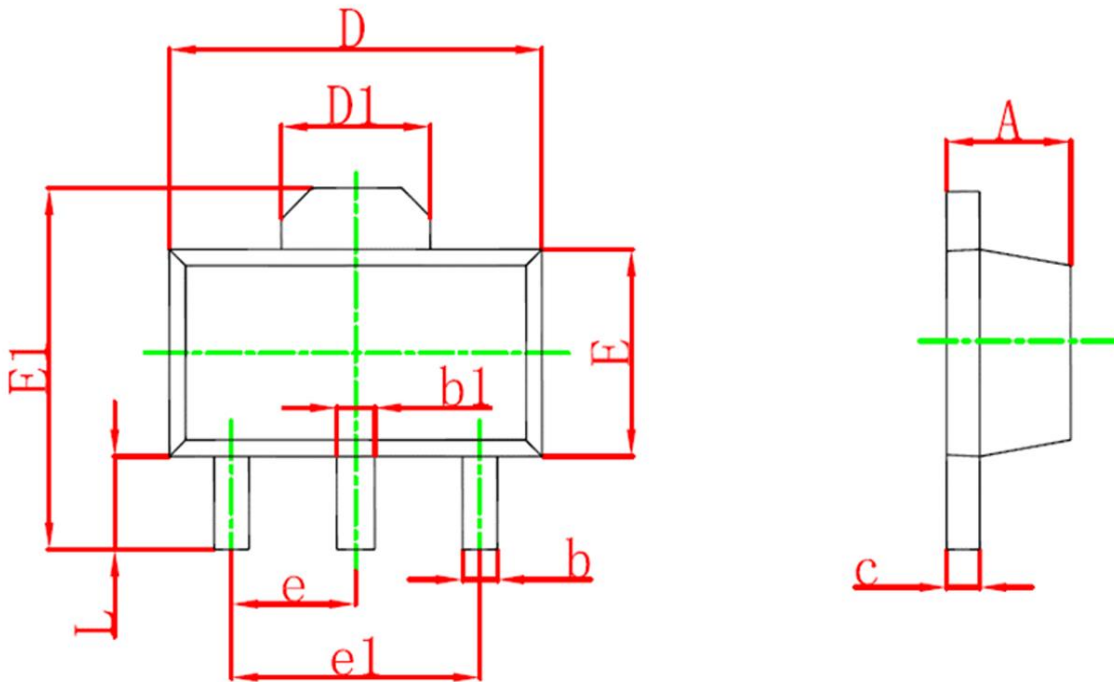
Symbol	Parameter	Condition	Min	Typ	Max	Unit
$V_{(BR)CBO}$	Collector-base breakdown voltage	$I_C=0.1mA, I_E=0$	150	--	--	V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C=10mA, I_B=0$	60	--	--	V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E=0.1mA, I_C=0$	7	--	--	V
I_{CBO}	Collector cut-off current	$V_{BC}=120V, I_E=0$	--	--	50	nA
I_{EBO}	Emitter cut-off current	$V_{BE}=6V, I_C=0$	--	--	10	nA
H_{FE}	DC current gain	$V_{CE}=1V, I_C=10mA$	100	--	--	--
		$V_{CE}=1V, I_C=2A$	100	--	400	
		$V_{CE}=1V, I_C=5A$	55	--	--	
		$V_{CE}=1V, I_C=10A$	20	--	--	
$V_{CE(sat)}$	Collector-emitter saturation voltage	$I_C=100mA, I_B=5mA$	--	--	30	mV
		$I_C=1A, I_B=50mA$	--	--	65	
		$I_C=2A, I_B=50mA$	--	--	125	
		$I_C=6A, I_B=300mA$	--	--	280	
$V_{BE(sat)}$	Base-emitter saturation voltage	$I_C=6A, I_B=300mA$	--	--	1.1	V
$V_{BE(on)}$	Base-emitter on voltage	$I_C=6A, V_{CE}=1V$	--	--	1.05	V
C_{ob}	Collector output capacitance	$V_{CB}=10V, I_E=0, f=1MHz$	--	35	--	pF
f_T	Transition frequency	$V_{CE}=10V, I_C=100mA, f=100MHz$	30	--	--	MHz

Typical Characteristics






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