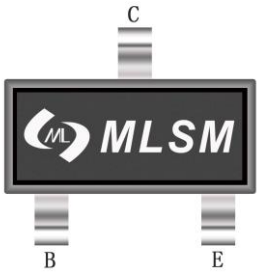
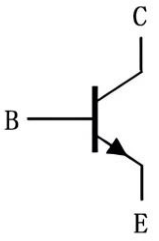
Features

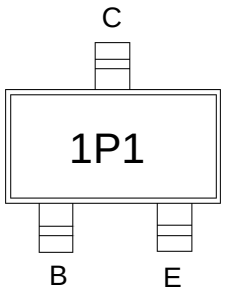
- Epitaxial planar die construction
- Complementary PNP Type available(MMBT2907A)



SOT-23 top view



Schematic diagram



Marking and pin assignment

Pb-Free RoHS Halogen-Free

Maximum Ratings (Ta=25℃ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	75	V
V_{CEO}	Collector-Emitter Voltage	40	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current	600	mA
P_C	Collector Power Dissipation	225	mW
T_J,T_{stg}	Operation Junction and Storage Temperature Range	-55~+150	°C

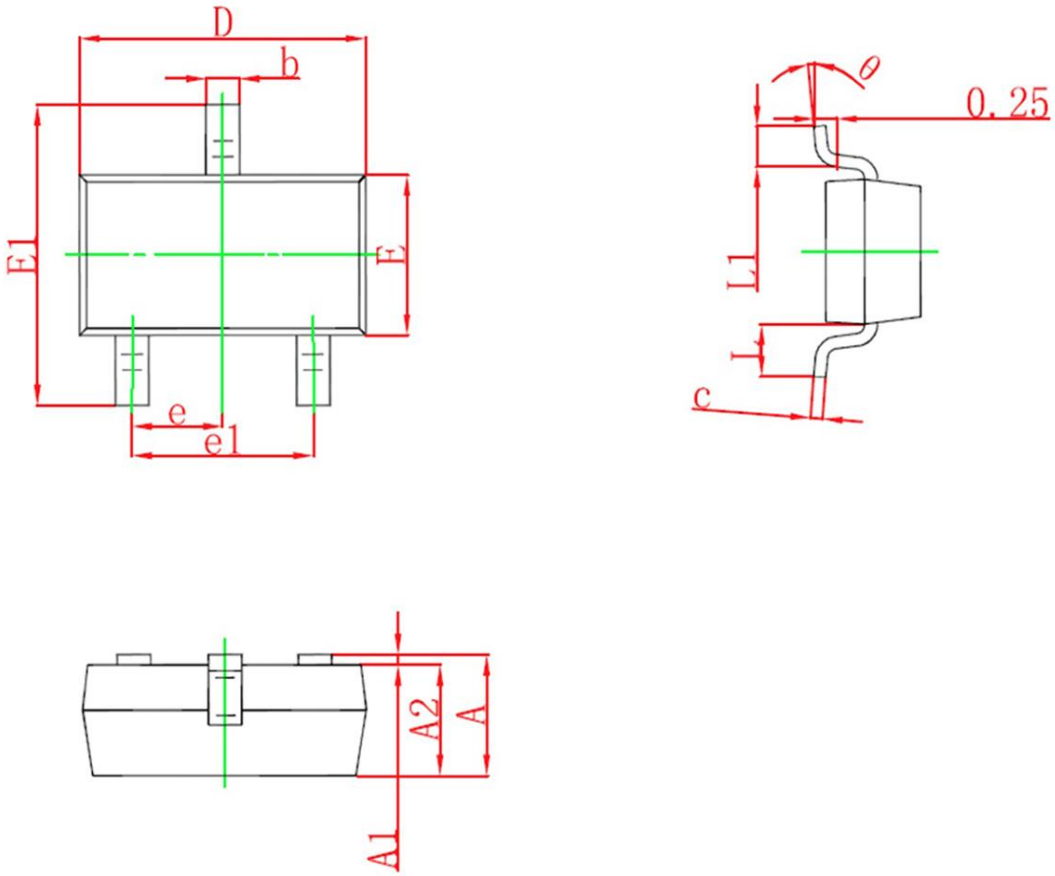
Ordering Information (Example)

Type	Package	Marking	Minimum Package(pcs)	Inner Box Quantity(pcs)	Outer Carton Quantity(pcs)	Delivery Mode
3DK2222A	SOT-23	1P1	3,000	45,000	180,000	7"reel

Electrical Characteristics (Ta=25℃ unless otherwise specified)

Symbol	Parameter	Condition	Min	Typ	Max	Unit
$V_{(BR)CBO}$	Collector-base breakdown voltage	I_C=10μA,I_E=0	75	--	--	V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	I_C=10mA, I_B=0	40	--	--	V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	I_E=10μA,I_C=0	6	--	--	V
I_{CBO}	Collector cut-off current	V_{CB}=70V , I_E=0	--	--	0.01	μA
I_{CEX}	Collector cut-off current	V_{CE}=60V, $V_{EB(off)}$=3V	--	--	0.01	μA
I_{EBO}	Emitter cut-off current	V_{EB}=3V , I_C=0	--	--	0.01	μA
$H_{FE(1)}$	DC current gain	V_{CE}=10V, I_C= 150mA	100	--	300	
$H_{FE(2)}$		V_{CE}=10V, I_C= 0.1mA	40	--	--	
$H_{FE(3)}$		V_{CE}=10V, I_C= 500mA	42	--	--	
$V_{CE(sat)}$	Collector-emitter saturation voltage	I_C=500 mA, I_B= 50mA	--	--	0.6	V
		I_C=150 mA, I_B=15mA	--	--	0.3	
$V_{BE(sat)}$	Base-emitter saturation voltage	I_C=500 mA, I_B= 50mA	--	--	1.2	V
f_T	Transition frequency	V_{CE}=20V, I_C= 20mA,f=100MHz	300	--	--	MHz
t_d	Delay time	V_{CC}=30V, $V_{BE(off)}$=-0.5V	--	--	10	ns
tr	Rise time	I_C=150mA , I_{B1}= 15mA	--	--	25	ns
t_S	Storage time	V_{CC}=30V, I_C=150mA	--	--	225	ns
t_f	Fall time	I_{B1}=-I_{B2}=15mA	--	--	60	ns

SOT-23 Package information



Symbol	Dimensions in Millimeters(mm)		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
E1	2.250	2.550	0.088	0.100
E	1.200	1.400	0.047	0.055
e	0.950TYP		0.037TYP	
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
θ	0°	8°	0°	8°