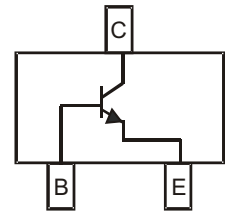
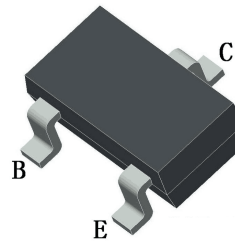


Features

- Darlington Amplifier

SOT-23



Marking:

- K2D

Limiting Values (Absolute Maximum Rating)

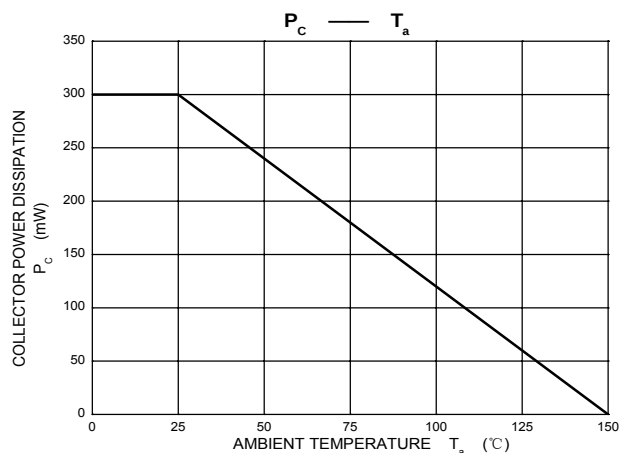
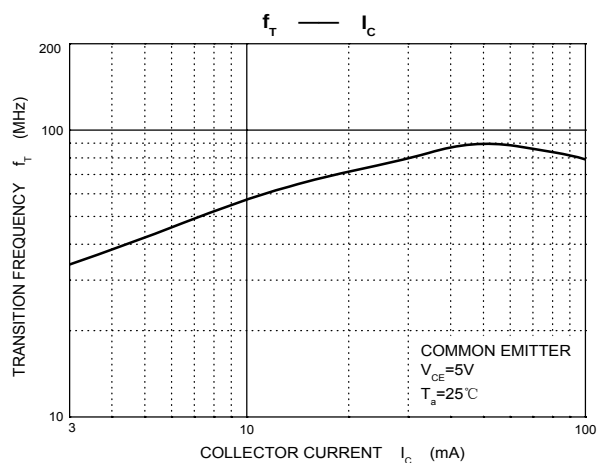
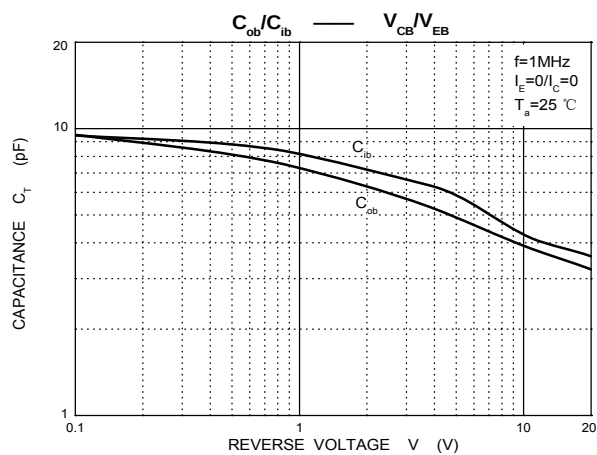
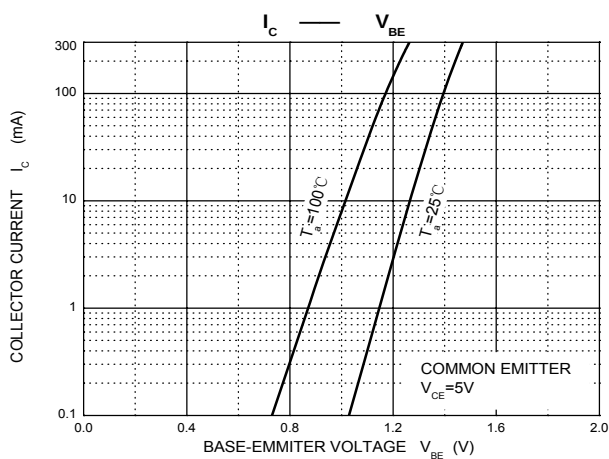
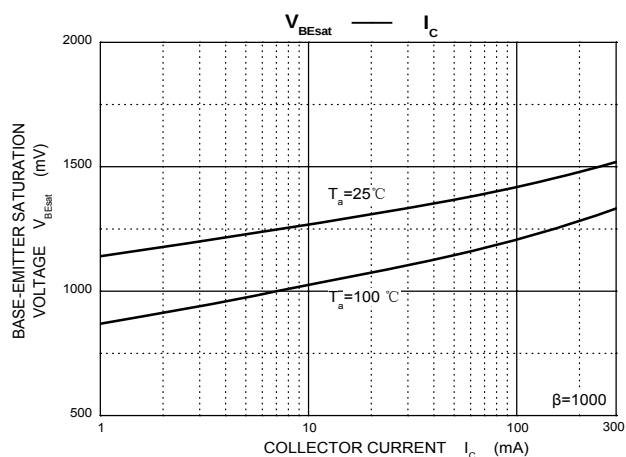
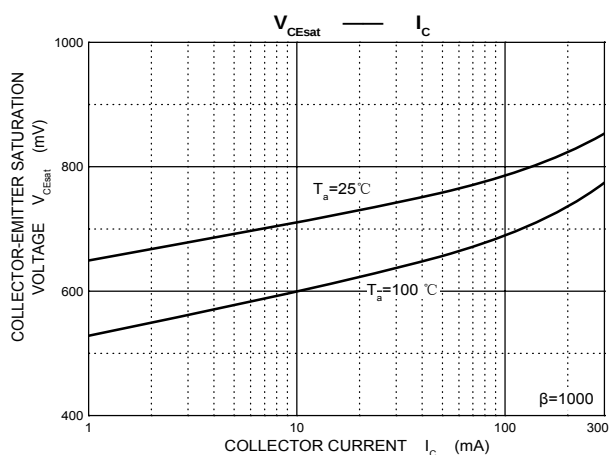
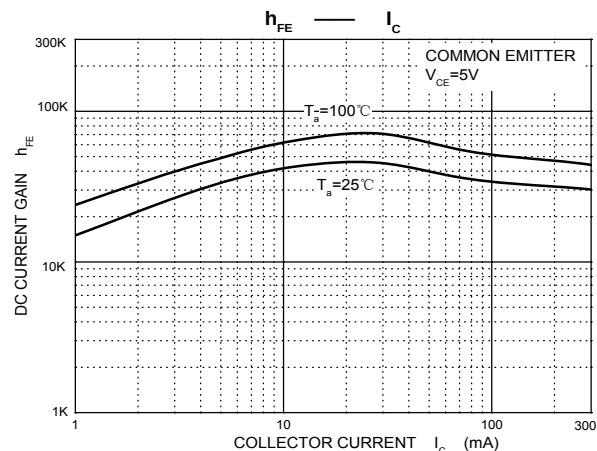
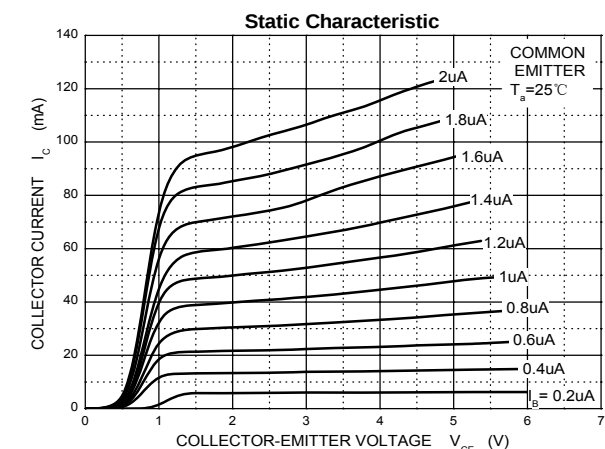
Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	30	V
V_{CEO}	Collector-Emitter Voltage	30	V
V_{EBO}	Emitter-Base Voltage	10	V
I_C	Collector Current	0.3	A
P_C	Collector Power Dissipation	300	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	417	°C/W
T_j	Junction Temperature	150	°C
T_{stg}	Storage Temperature	-55~+150	°C

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

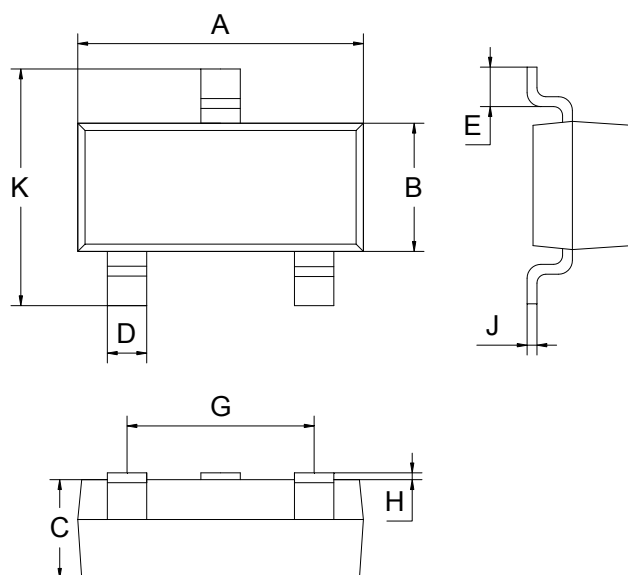
Parameter	Symbol	Test conditions	Min	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = 100\mu A, I_E = 0$	30		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = 100\mu A, I_B = 0$	30		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = 100\mu A, I_C = 0$	10		V
Collector cut-off current	I_{CBO}^*	$V_{CB} = 30V, I_E = 0$		0.1	μA
Emitter cut-off current	I_{EBO}^*	$V_{EB} = 10V, I_C = 0$		0.1	μA
DC current gain	$h_{FE(1)}^*$	$V_{CE} = 5V, I_C = 10mA$	5000		
	$h_{FE(2)}^*$	$V_{CE} = 5V, I_C = 100mA$	10000		
Collector-emitter saturation voltage	$V_{CE(sat)}^*$	$I_C = 100mA, I_B = 0.1mA$		1.5	V
Base-emitter saturation voltage	$V_{BE(sat)}^*$	$I_C = 100mA, I_B = 0.1mA$		2	V
Base-emitter voltage	V_{BE}^*	$V_{CE} = 5V, I_C = 100mA$		2.0	V
Transition frequency	f_T	$V_{CE} = 5V, I_C = 10mA$ $f = 100MHz$	125		MHz
Collector output capacitance	C_{ob}	$V_{CB} = 10V, I_E = 0, f = 1MHz$		12	pF

* Pulse Test : pulse width $\leq 300\mu s$, duty cycle $\leq 2\%$.

Typical Characteristics

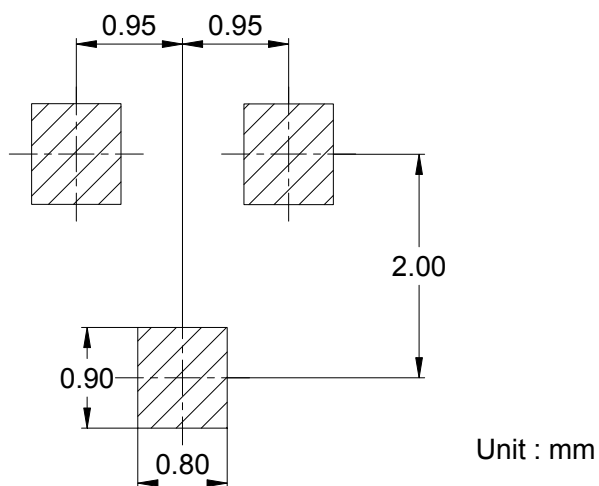


SOT-23 Package Outline Dimensions



SOT-23		
Dim	Min	Max
A	2.70	3.10
B	1.10	1.50
C	0.90	1.10
D	0.30	0.50
E	0.35	0.48
G	1.80	2.00
H	0.02	0.10
J	0.05	0.15
K	2.20	2.60
All Dimensions in mm		

SOT-23 Suggested Pad Layout



Package Information

TYPE	REEL	Reel Size	Box	Carton
MMBTA13	3000 pcs	7 Inch	45,000 pcs	180,000 pcs