/ Descriptions

SOT-89 NPN Silicon NPN transistor in a SOT-89 Plastic Package.

/ Features

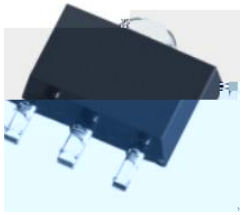
MBIT -
,
KTB1124

Adoption of MBIT processes, low collector-to-emitter saturation voltage, fast Switching Speed, Large current capacity and wide ASO, Complementary to KTB1124. Halogen-free Product.

/ Applications

Voltage regulators ,relay drivers lamp drivers, electrical equipment.

/ Equivalent Circuit



PIN1 Base PIN 2 Collector PIN 3 Emitter

/ Marking

h_{FE} Classifications Symbol	A	B	C
h_{FE} Range	100 200	140 280	200 400
Marking	YHA	YHB	YHC

/ Absolute Maximum Ratings(Ta=25)

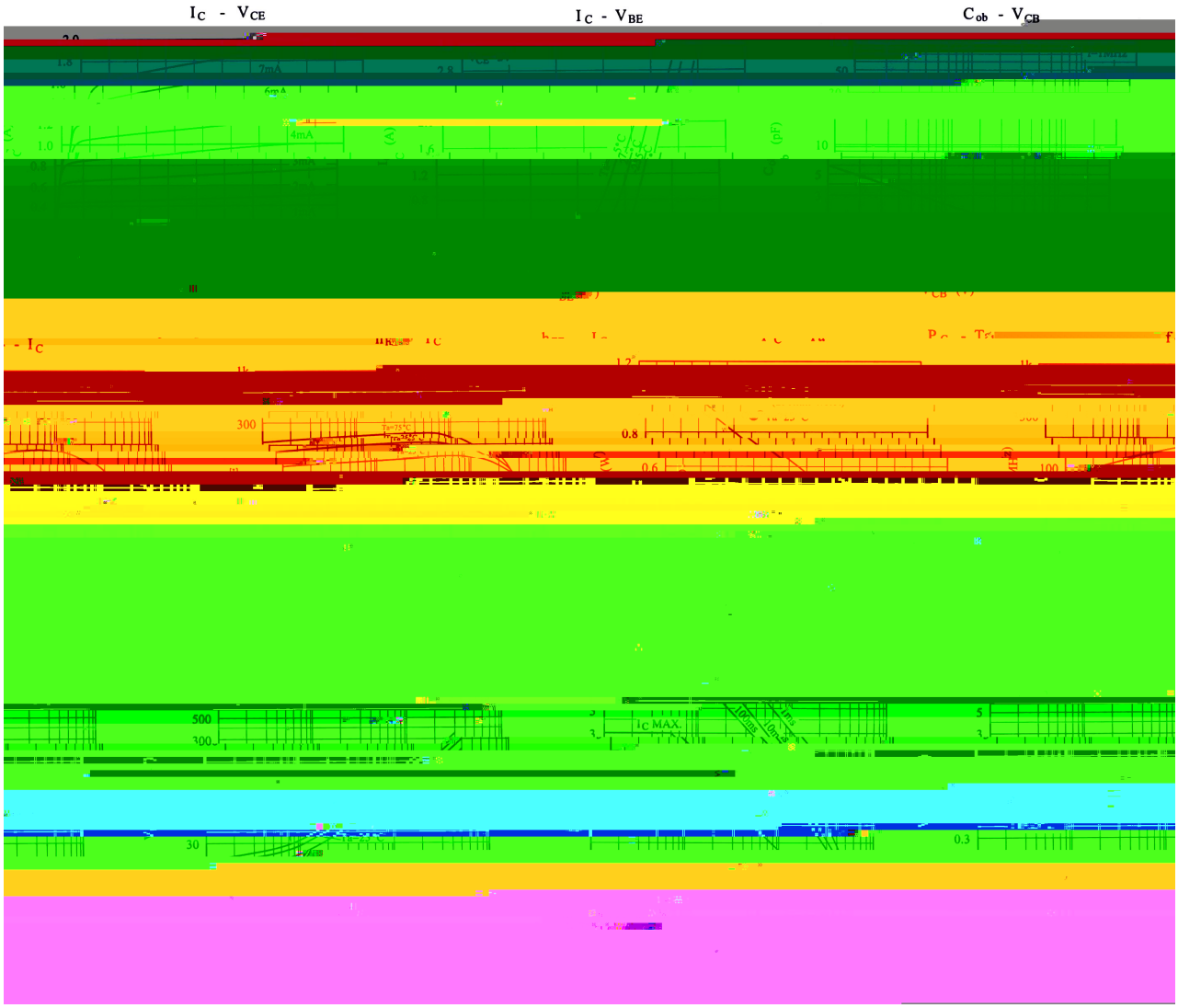
Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	60	V
Collector to Emitter Voltage	V_{CEO}	50	V
Emitter to Base Voltage	V_{EBO}	6.0	V
Collector Current - Continuous	I_C	3.0	A
Collector Current – Continuous Pulse	I_{CP}	6.0	A
Collector Power Dissipation	P_C	500	mW
Collector Power Dissipation*	*P_C	1.0	W
Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55 150	

*:Package mounted on ceramic substrate(250mm^2×0.8t)

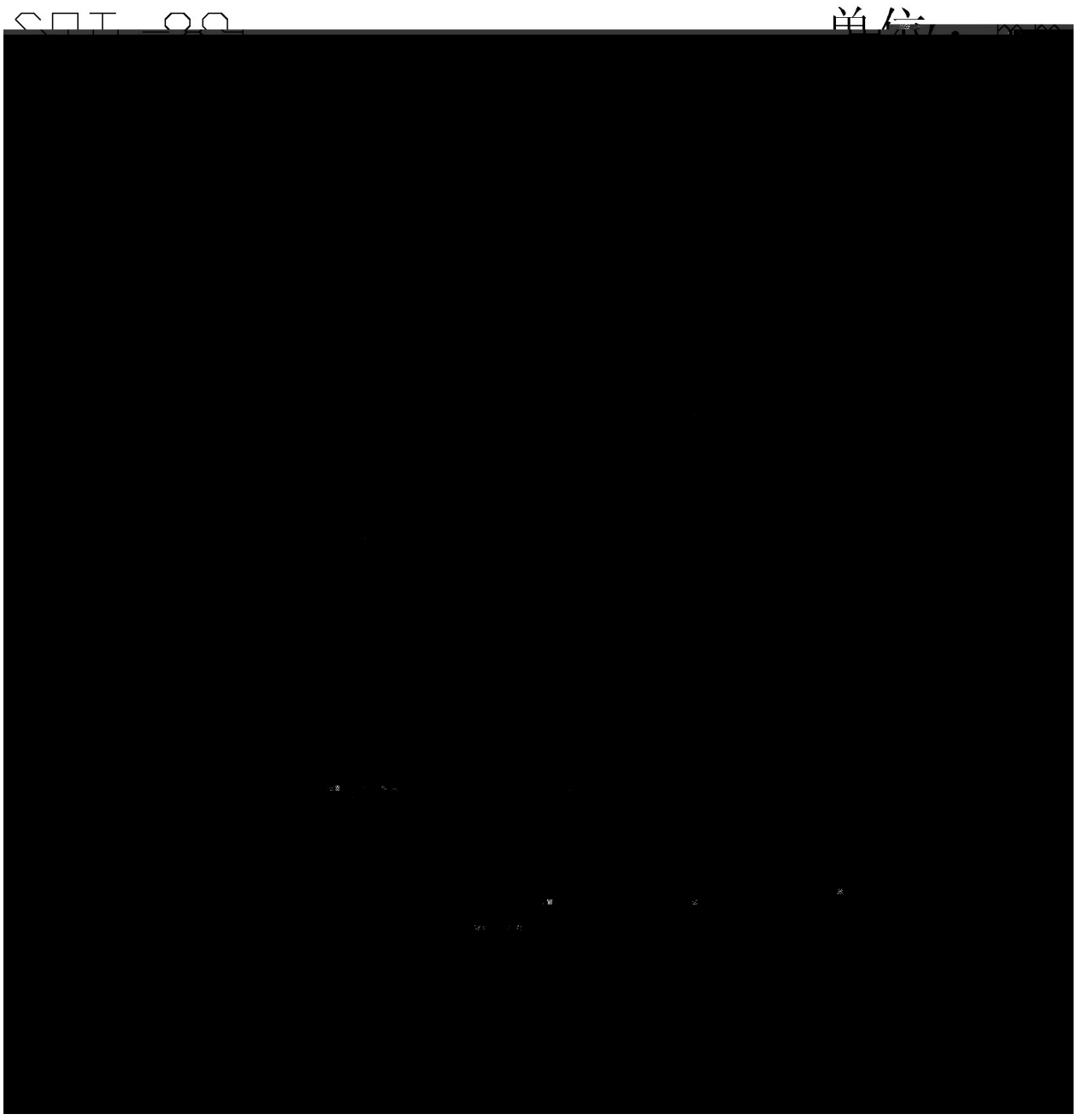
/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Base Breakdown Voltage	V_{CBO}	I_C=10μA I_E=0	60			V
Collector to Emitter Breakdown Voltage	V_{CEO}	I_C=1.0mA I_B=0	50			V
Emitter to Base Breakdown Voltage	V_{EBO}	I_E=10μA I_C=0	6.0			V
Collector Cut-Off Current	I_{CBO}	V_{CB}=40V I_E=0			1.0	μA
Emitter Base Cut-Off Current	I_{EBO}	V_{EB}=4.0V I_C=0			1.0	μA
DC Current Gain	$h_{FE(1)}$	V_{CE}=2.0V I_C=100mA	100		400	
	$h_{FE(2)}$	V_{CE}=2.0V I_C=3.0A	35			
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=2.0A I_B=100mA		0.19	0.5	V
Base to Emitter Voltage	V_{BE}	I_C=2.0A I_B=100mA		0.94	1.2	V
Transition Frequency	f_T	V_{CE}=10V I_C=50mA		150		MHz
Collector Output Capacitance	C_{ob}	V_{CB}=10V I_E=0 f=1MHz		25		pF
Turn-On Time	t_{on}	101_{B1}=-101_{B2}=I_C=1.0A		70		nS
Storage Time	t_{stg}			650		nS
Fall Time	t_f			35		nS

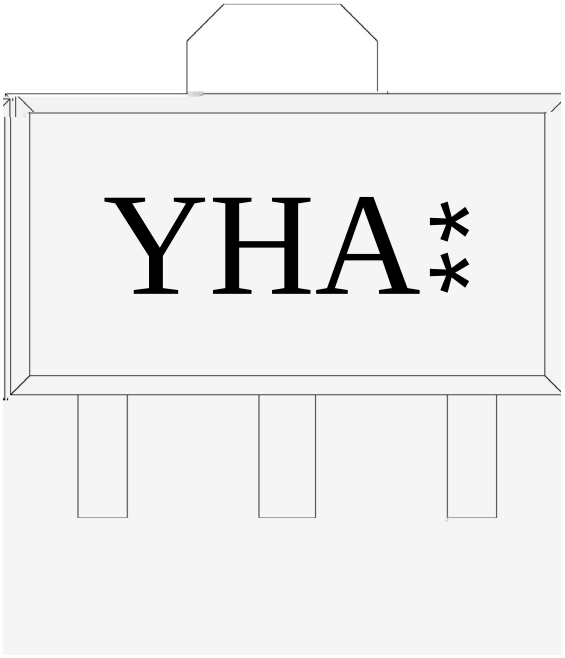
/ Electrical Characteristic Curve



/ Package Dimensions



/ Marking Instructions



Y	
H	
A	h_{FE}
**	

Note:

Y:	Product Type.
H:	Company Code.
A	h_{FE} Classifications Symbol
**:	Lot No. Code, code change with Lot No.