

工业型号	公司型号	封装形式	通俗命名	包装方式	最小包装	每盒	每箱
MJE13003U	H13003HU	TO-251	13003	条管装	80Pcs/管	4Kpcs	24Kpcs
MJE13003D	H13003HD	TO-252		载带卷盘	2.5K/盘	5Kpcs	25Kpcs

H13003H Series
NPN EPITAXIAL PLANAR TRANSISTOR

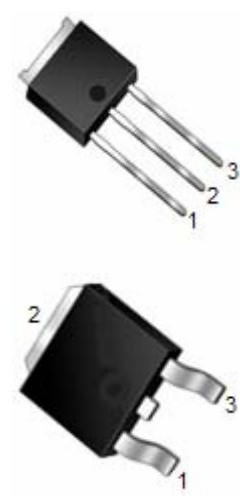
Description
These devices are designed for high-voltage, high-speed power-switching inductive circuits where fall time is critical. They are particularly suited for 115 and 220V switchmode-applications such as Switching Regulators, Inverters, Motor Controls, olenoid/Relay drivers and Deflection circuits.

FEATURES
HIGH VOLTAGE CAPABILITY
HIGH SPEED SWITCHING, WIDE SOA
RoHS COMPLIANT

APPLICATION
RECHARGER, FLUORESCENT LAMP
ELECTRONIC BALLAST

■ 特点: 耐压高、开关速度快、安全工作区宽、符合RoHS规范
■ 应用: 各种充电器、节能灯、电子镇流器、电源适配器等产品
■ 封装形式: TO-251 (IPAK)、TO-252 (DPAK)

H13003H Series Pin Assignment



3-Lead Plastic TO-251
Package Code: U
Pin 1: B (Base-基极)
Pin 2: C (Collector-集电极)
Pin 3: E (Emitter-发射极)

2-Lead Plastic TO-252
Package Code: D
Pin 1: B (Base-基极)
Pin 2: C (Collector-集电极)
Pin 3: E (Emitter-发射极)

■ 最大额定值 (Ta=25°C) Absolute Maximum Ratings (Ta=25°C)

符号 SYMBOL	参数 PARAMETER	额定值 VALUE	单位 UNIT
V_{CBO}	集电极-基极电压 Collector-Base Voltage	850	V
V_{CEO}	集电极-发射极电压 Collector-Emitter Voltage	500	
V_{EBO}	集电极-发射极电压 Emitter- Base Voltage	9.0	
I_B	基极电流 Base Current	1.0	A
I_{BM}	基极峰值电流 Base Peak Current	2.0	
I_C	集电极电流 Collector Current	2.0	
I_{CM}	集电极峰值电流 Collector Peak Current	4.0	
P_{tot}	集电极耗散功率 Total Power Dissipation	1.0	W
T_j	最高工作温度 Junction Temperature	150	°C
T_{stg}	贮存温度 Storage Temperature	-65~+150	

■ 电特性 (Ta=25℃) Electronic Characteristics (Ta=25℃)

符号 SYMBOL	参数名称 CHARACTERISTICS	测试条件 TEST CONDITION	最小值 MIN	最大值 MAX	单位 UNIT
I_{CBO}	集电极-基极截止电流 Collector-Base Cutoff Current	$V_{CB}=850V$		100	μA
I_{CEO}	集电极-发射极截止电流 Collector-Emitter Cutoff Current	$V_{CE}=500V, I_B=0$		250	
V_{CBO}	集电极-基极电压 Collector-Base Voltage	$I_C=1mA, I_E=0$	850		V
V_{CEO}	集电极-发射极电压 Collector-Emitter Voltage	$I_C=10mA, I_E=0$	500		
V_{EBO}	发射极-基极电压 Emitter-Base Voltage	$I_E=1mA, I_C=0$	9		
V_{cesat}	集电极-发射极饱和电压 Collector-Emitter Saturation Voltage	$I_C=0.5A, I_B=0.1A$		0.5	
		$I_C=1.5A, I_B=0.3A$		1.2	
V_{besat}	发射极-基极饱和电压 Base-Emitter Saturation Voltage	$I_C=0.5A, I_B=0.1A$		1.0	
hFE	电流放大倍数 DC Current Gain	$V_{CE}=5V, I_C=10mA$	7		
		$V_{CE}=5V, I_C=100mA$	20	35	
		$V_{CE}=5V, I_C=2A$	4		

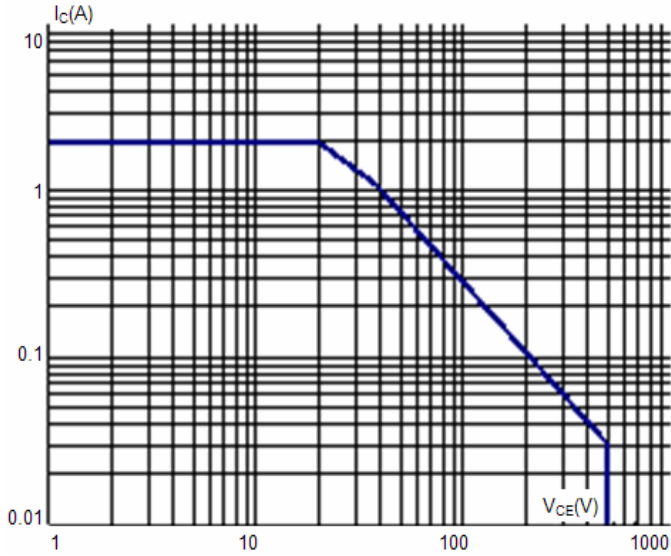
■ 订单信息 ORDERING INFORMATION:

包装方式 PACKING	订货方式 ORDERING CODE	
	普通塑封料 Normal Package Material	无卤塑封料 Halogen Free
TO-251 普通袋装 NORMAL PACKING	MJE13003HU	MJE13003HU-PbF
TO-251 条管装 NORMAL PACKING	MJE13003HU-TU	MJE13003HU-TU-PbF
TO-252 条管装 NORMAL PACKING	MJE13003HD-TU	MJE13003HD-TU-PbF
TO-252 载带卷盘装 AMMOPACK	MJE13003HD-TR	MJE13003HD-TR-PbF

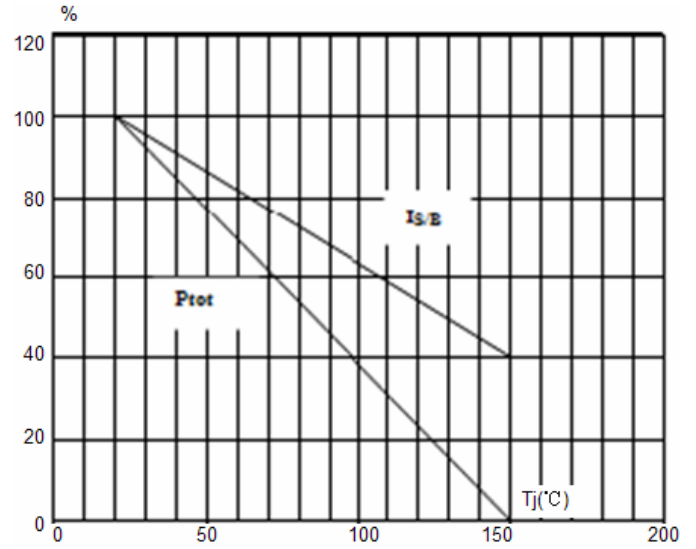
■ 包装规格 Packaging Specifications

TO-251	条管装, 每管80只, 每盒4000只, 每箱24000只 (80Pcs/Tube, 4Kpcs/BOX, 24Kpcs/Carton)
TO-252	条管装, 每管80只, 每盒4000只, 每箱24000只 (80Pcs/Tube, 4Kpcs/BOX, 24Kpcs/Carton)
	载带卷盘包装, 每卷盘2500只, 每盒5000只, 每箱25000只 (2.5Kpcs/Reel, 5Kpcs/BOX, 25Kpcs/Carton)

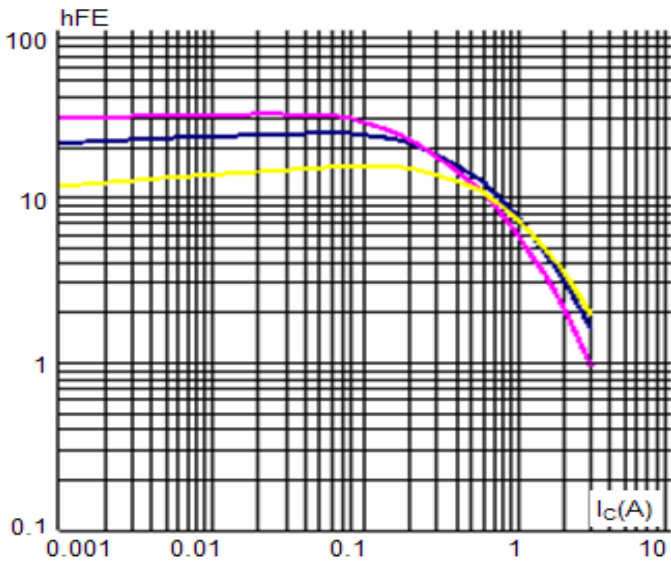
SOA(CD)



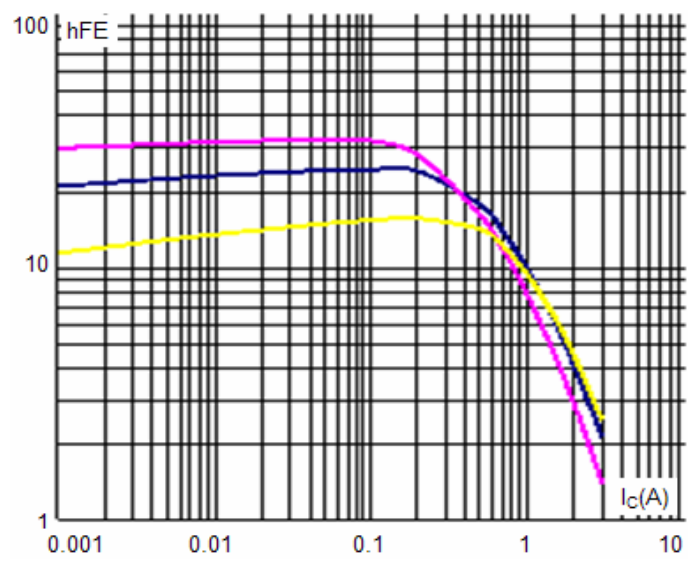
Ptotoc Tj



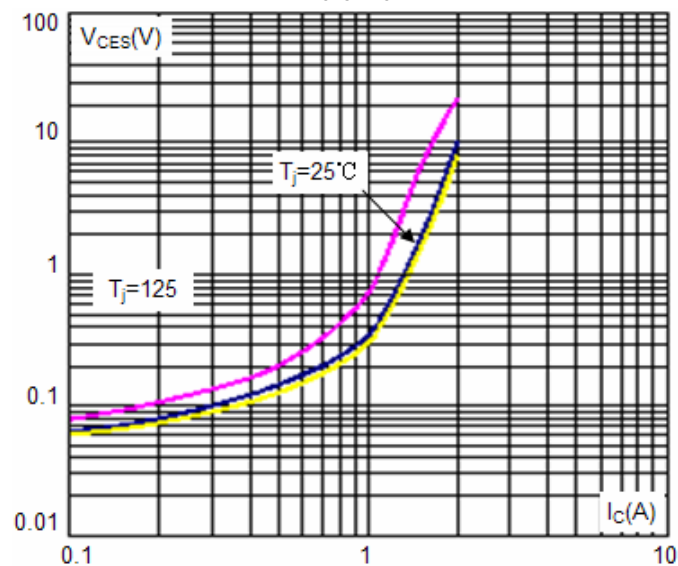
hFE - Ic



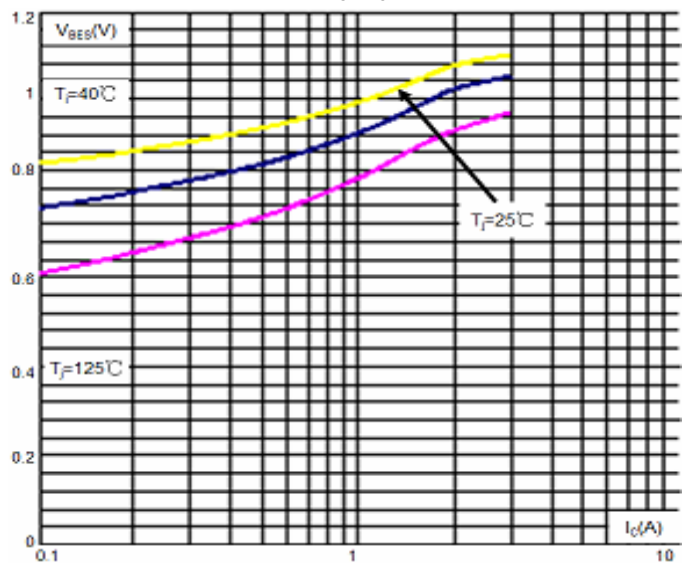
hFE - Ic



Vces - Ic



Vbes - Ic

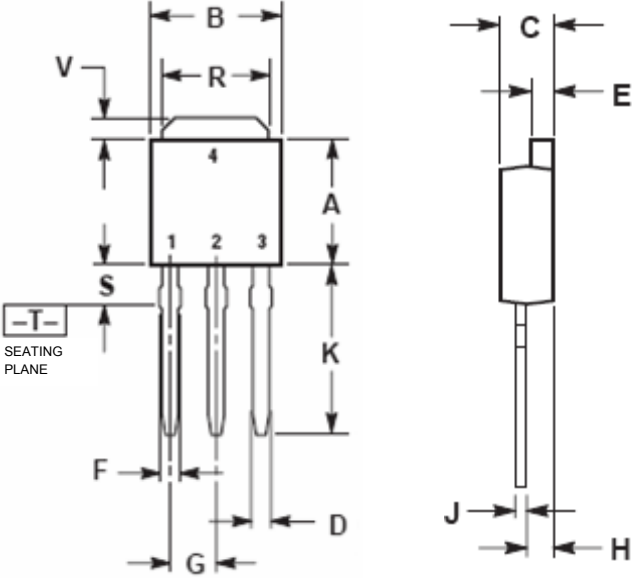


PACKAGE DIMENSIONS

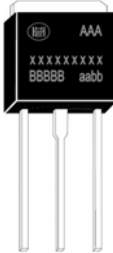
TO-251 (IPAK) Dimension (封装尺寸数据, 单位: mm)

DIM	MILLIMETERS	
	Min.	Max.
A	5.97	6.35
B	6.35	6.73
C	2.19	2.38
D	0.69	0.88
E	0.84	1.01
F	0.94	1.19
G	2.29 BSC	
H	0.87	1.01
J	0.46	0.58
K	8.89	9.65
R	4.45	5.46
S	1.27	2.28
V	0.77	1.27

SEATING PLANE



元件打印标识

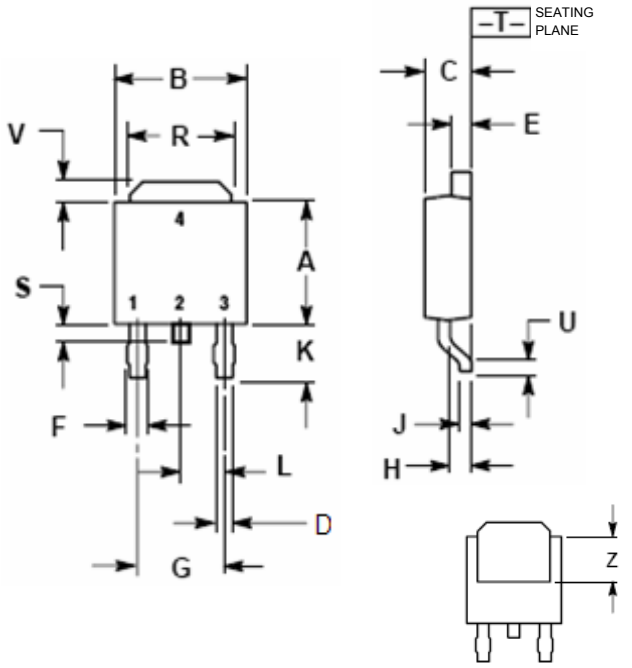


左上角:公司LOGO
AAA:芯片代码
XXXXXXXXXX:器件型号
BBBBB:批次代码
aabb:出厂批号
其中:
aa:出厂年份
bb:出厂自然周 (01-53)


TO-252 (DPAK) Dimension (封装尺寸数据, 单位: mm)

DIM	MILLIMETERS	
	Min.	Max.
A	5.97	6.35
B	6.35	6.73
C	2.19	2.38
D	0.69	0.88
E	0.84	1.01
F	0.94	1.19
G	4.58 BSC	
H	0.87	1.01
J	0.46	0.58
K	2.60	2.89
L	2.29 BSC	
R	4.45	5.46
S	0.51	1.27
U	0.51	--
V	0.77	1.27
Z	3.51	--

SEATING PLANE



元件打印标识



左上角:公司LOGO
AAA:芯片代码
XXXXXXXXXX:器件型号
BBBBB:批次代码
aabb:出厂批号
其中:
aa:出厂年份
bb:出厂自然周 (01-53)

Manufacturers version information

2007-03-11 , HAOHAI™ Product Data-S1.0

2010-04-10 , HAOHAI™ Product Data-S1.1

2014-07-11 , HAOHAI™ Product Data-S2.0



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