

Descriptions

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

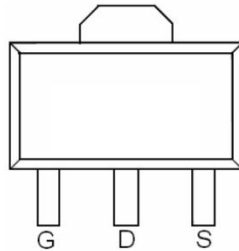
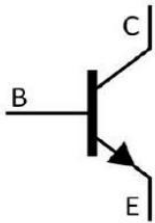
Features

- Low saturation voltage
- Excellent DC current gain characteristics
- Complements the 2SA1797
- Halogen-free product

Applications

Low frequency power amplifier applications.

Equivalent Circuit & Pinning



SOT-89 top view

PIN1: Base

PIN 2: Collector

PIN 3: Emitter

Marking

h_{FE} Classifications Symbol	P	Q
h_{FE} Range	82~180	120~270
Marking	HDKP	HDKQ

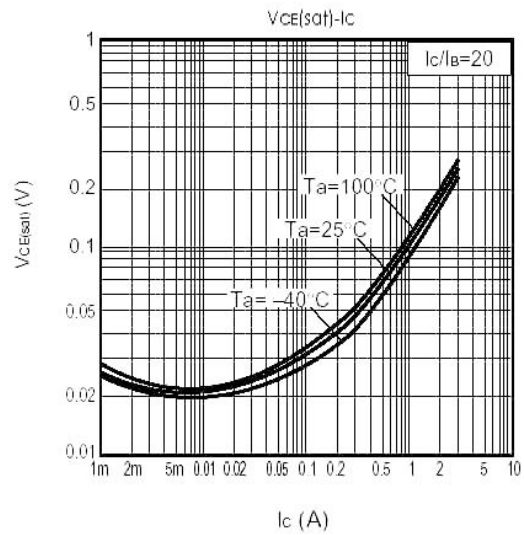
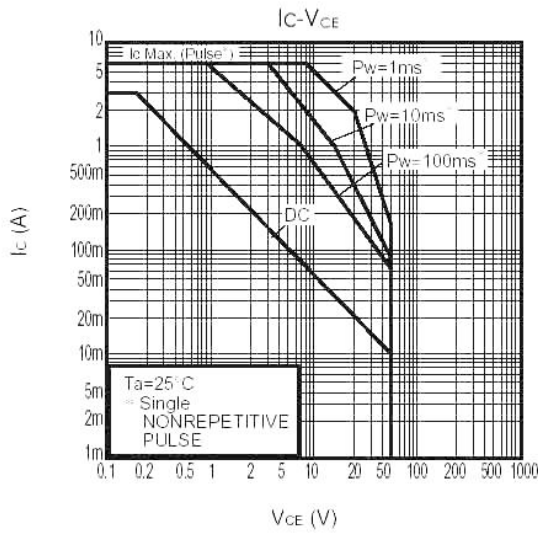
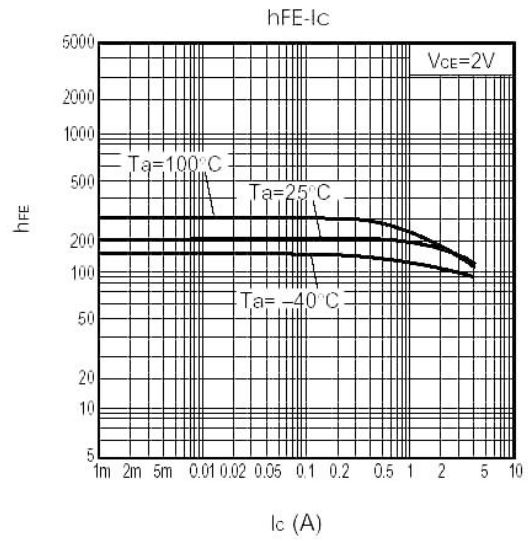
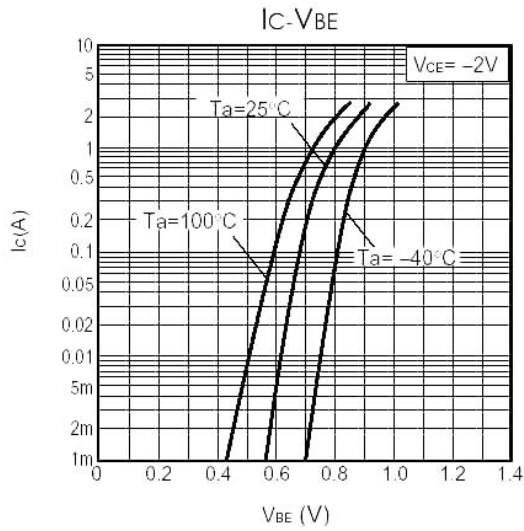
Absolute Maximum Ratings(Ta=25°C)

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	0.5	W
Collector Power Dissipation*	* P_C	2.0	W
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	-55~150	°C

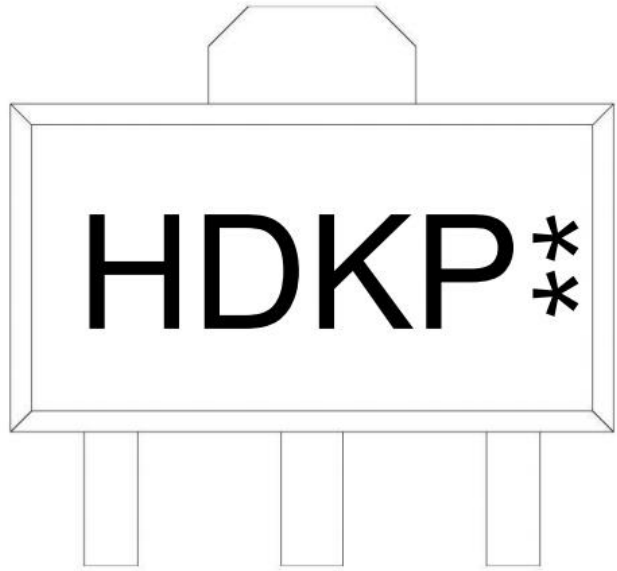
Electrical Characteristics(Ta=25°C)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Base Breakdown Voltage	V_{CBO}	$I_C=50\mu A$	60			V
Collector to Emitter Breakdown Voltage	V_{CEO}	$I_C=1.0mA$	50			V
Emitter to Base Breakdown Voltage	V_{EBO}	$I_E=50\mu A$	6.0			V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=60V$			0.1	μA
Emitter Base Cut-Off Current	I_{EBO}	$V_{EB}=5.0V$			0.1	μA
DC Current Gain	$h_{FE(1)}$	$V_{CE}=2.0V$ $I_C=500mA$	82		270	
	$h_{FE(2)}$	$V_{CE}=2.0V$ $I_C=1.5A$	45			
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=1.0A$ $I_B=50mA$		0.13	0.35	V
Transition Frequency	f_T	$V_{CE}=2.0V$ $I_C=0.5A$ $f=100MHz$		210		MHz
Collector Output Capacitance	C_{ob}	$V_{CB}=10V$ $f=1.0MHz$		25		pF

Electrical Characteristic Curve



Marking Instructions



- Note:
- H: Company Code
 - DK: Product Type
 - P: h_{FE} Classifications Symbol
 - ** : Lot No. Code, code change with Lot No

h_{FE} Classifications Symbol	P	Q
h_{FE} Range	82~180	120~270
Marking	HDKP	HDKQ

Packaging SPEC

REEL INFORMATION

Package Type	Units					Dimension (unit: mm ³)		
	Units/Reel	Reels/Inner Box	Units/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Reel	Inner Box	Outer Box
SOT-89	1,000	7	7,000	8	56000	7" ×12	180×120×180	385×257×392

Package Outline Dimensions

SOT-89

单位: mm

