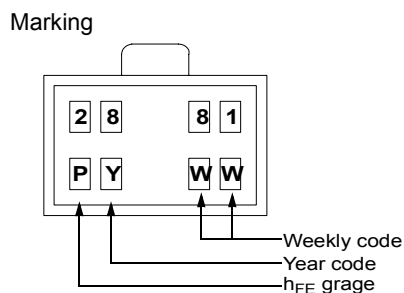
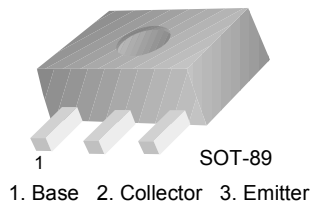


# KSC2881

## NPN Epitaxial Silicon Transistor

### Power Amplifier

- Collector-Emitter Voltage :  $V_{CEO}=120V$
- Current Gain Bandwidth Product :  $f_T=120MHz$
- Collector Dissipation :  $P_C=1\sim 2W$  in Mounted on Ceramic Board
- Complement to KSA1201



### Absolute Maximum Ratings $T_a = 25^\circ C$ unless otherwise noted

Symbol	Parameter	Value	Units
$V_{CBO}$	Collector-Base Voltage	120	V
$V_{CEO}$	Collector-Emitter Voltage	120	V
$V_{EBO}$	Emitter-Base Voltage	5	V
$I_C$	Collector Current	800	mA
$I_B$	Base Current	160	mA
$P_C$ $P_C^*$	Collector Power Dissipation	500 1,000	mW mW
$T_J$	Junction Temperature	150	$^\circ C$
$T_{STG}$	Storage Temperature	-55 ~ 150	$^\circ C$

\* Mounted on Ceramic Board (250mm<sup>2</sup> x 0.8mm)

### Electrical Characteristics $T_a = 25^\circ C$ unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
$BV_{CEO}$	Collector-Emitter Breakdown Voltage	$I_C = 10\mu A, I_B = 0$	120			V
$BV_{EBO}$	Emitter-Base Breakdown Voltage	$I_E = 1mA, I_C = 0$	5			V
$I_{CBO}$	Collector Cut-off Current	$V_{CB} = 120V, I_E = 0$			100	nA
$I_{EBO}$	Emitter Cut-off Current	$V_{BE} = 5V, I_C = 0$			100	nA
$h_{FE}$	DC Current Gain	$V_{CE} = 5V, I_C = 100mA$	80		240	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = 500mA, I_B = 50mA$			1.0	V
$V_{BE(on)}$	Base-Emitter On Voltage	$V_{CE} = 5V, I_C = 500mA$			1.0	V
$f_T$	Current Gain Bandwidth Product	$V_{CE} = 5V, I_C = 100mA$		120		MHz
$C_{ob}$	Output Capacitance	$V_{CB} = 10V, I_E = 0, f = 1MHz$			30	pF

**h<sub>FE</sub> Classification**

Classification	O	Y
h <sub>FE</sub>	80 ~ 160	120 ~ 240

**Package Marking and Ordering Information**

Device Marking	Device	Package	Reel Size	Tape Width	Quantity
2881	KSC2881	SOT-89	13"	--	4,000

## Typical Performance Characteristics

Figure 1. Static Characteristic

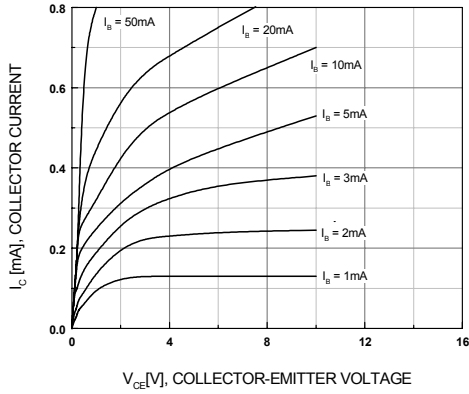


Figure 2. Base-Emitter On Voltage

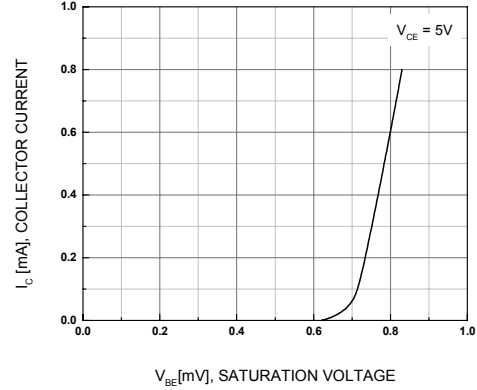


Figure 3. DC Current Gain

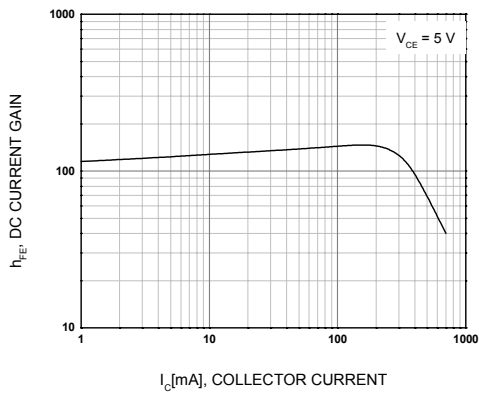


Figure 4. Collector-Emitter Saturation Voltage

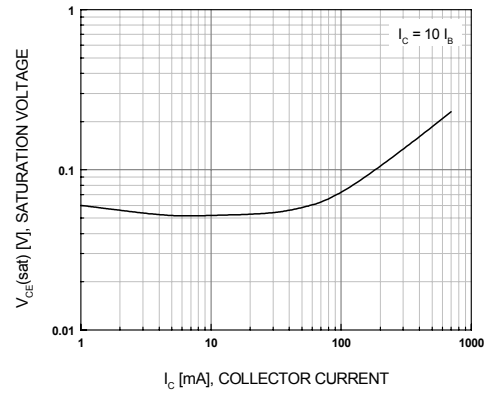


Figure 5. Power Derating

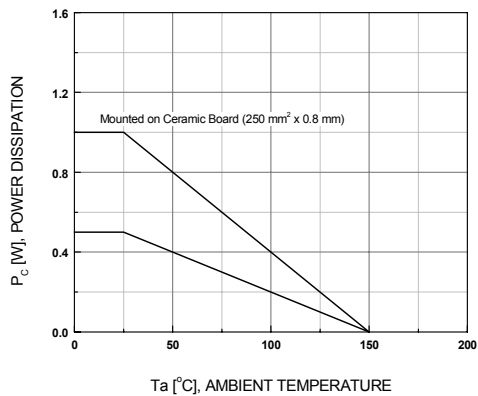
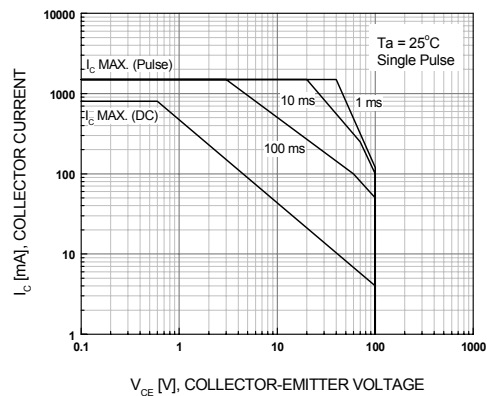
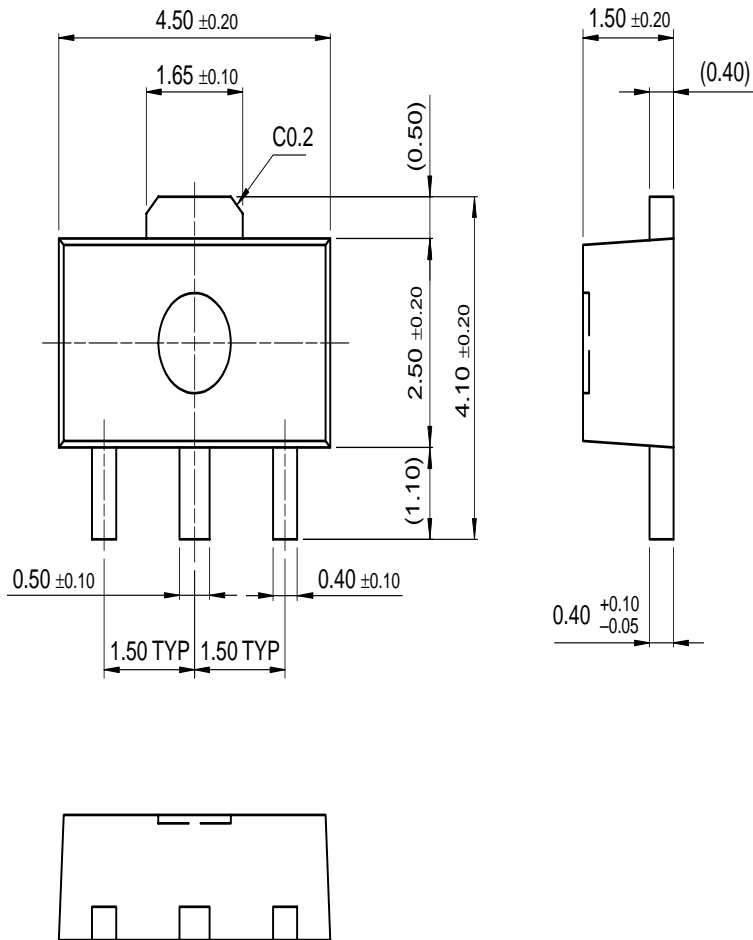


Figure 6. Safe Operating Area



Mechanical Dimensions

SOT-89



Dimensions in Millimeters

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CoolFET™	GlobalOptoisolator™	MicroPak™	QT Optoelectronics™	TruTranslation™
CROSSVOLT™	GTO™	MICROWIRE™	Quiet Series™	UHC™
DOME™	HiSeC™	MSX™	RapidConfigure™	UltraFET®
EcoSPARK™	I <sup>2</sup> C™	MSXPro™	RapidConnect™	UniFET™
E <sup>2</sup> CMOS™	i-Lo™	OCX™	μSerDes™	VCX™
EnSigna™	ImpliedDisconnect™	OCXPro™	SILENT SWITCHER®	Wire™
FACT™	IntelliMAX™	OPTOLOGIC®	SMART START™	
FACT Quiet Series™		OPTOPLANAR™	SPM™	
Across the board. Around the world.™		PACMAN™	Stealth™	
The Power Franchise®		POP™	SuperFET™	
Programmable Active Droop™		Power247™	SuperSOT™-3	
		PowerEdge™	SuperSOT™-6	

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