

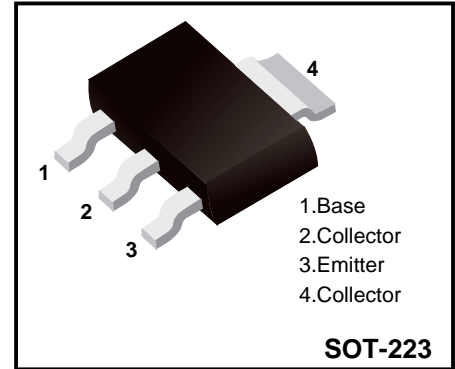
PNP Plastic-Encapsulate Transistors

Applications

- Medium Power Switching
- Power Amplification

Features

- High current output up to -6A
- Low saturation voltage
- Complement to DSS60601MZ4



Marking Code	
DSS60600MZ4	ZPS66

Absolute Maximum Rating (Ta=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	BV_{CBO}	-100	V
Collector-Emitter Voltage	BV_{CEO}	-60	V
Emitter-Base Voltage	BV_{EBO}	-6	V
Collector Current	I_C	-6	A
Pulse Collector Current	I_{CM}	-12	A
Power Dissipation	P_D	1.2	W
Junction Temperature	T_j	150	°C
Storage Temperature	T_{stg}	-55~150	°C

Characteristics (Ta=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Thermal Resistance, Junction to Ambient Air (Note 1)	$R_{\theta JA}$	104	°C/W
Thermal Resistance, Junction to Ambient Air (Note 2)	$R_{\theta JA}$	62.5	°C/W

- Notes: 1. Device mounted on FR-4 PCB with minimum recommended pad layout.
 2. Device mounted on Polyimide PCB with 330mm² oz. Copper pad layout.

Electrical Characteristics (Ta=25°C unless otherwise noted)

Parameter	Symbol	Conditions	Value			Unit
			Min	Typ	Max	
Collector-base breakdown voltage	BV_{CBO}	$I_C = -100\mu A, I_E = 0$	-100			V
Collector-emitter breakdown voltage	BV_{CEO}	$I_C = -10mA, I_B = 0$	-60			V
Emitter-base breakdown voltage	BV_{EBO}	$I_E = -100\mu A, I_C = 0$	-6			V
Collector cut-off current	I_{CBO}	$V_{CB} = -100V, I_B = 0$			-100	nA
Emitter cut-off current	I_{EBO}	$V_{EB} = -6V, I_C = 0$			-100	nA
DC current gain*	h_{FE}	$V_{CE} = -2V, I_C = -0.5A$	150			
		$V_{CE} = -2V, I_C = -1A$	120		360	
		$V_{CE} = -2V, I_C = -2A$	100			
		$V_{CE} = -2V, I_C = -6A$	70			
Equivalent On-Resistance	$R_{CE(sat)}$	$I_C = -2A, I_B = -0.2A$			60	mΩ
Base-emitter saturation voltage*	$V_{BE(sat)}$	$I_C = -1A, I_B = -0.1A$			-1.0	V
Base-Emitter Turn-on Voltage	$V_{BE(on)}$	$V_{CE} = -2V, I_C = -1A$			-0.9	V
Transition frequency	f_T	$V_{CE} = -10V, I_B = -0.1A$ $f = 100MHz$	100			MHz
Output Capacitance	C_{obo}	$V_{CB} = -10V, f = 1MHz$		30		pF
Input Capacitance	C_{ibo}	$V_{EB} = -10V, f = 1MHz$		300		pF

* Pulse test: $PW \leq 300\mu s$, duty cycles $\leq 2\%$ Pulse

Typical Characteristic

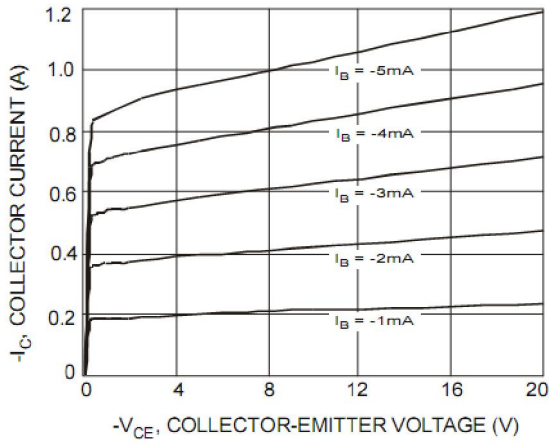


Figure 1. Static Characteristic

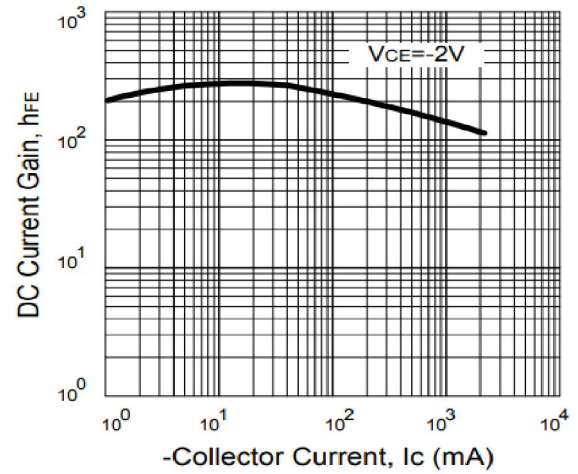


Figure 2. DC current Gain

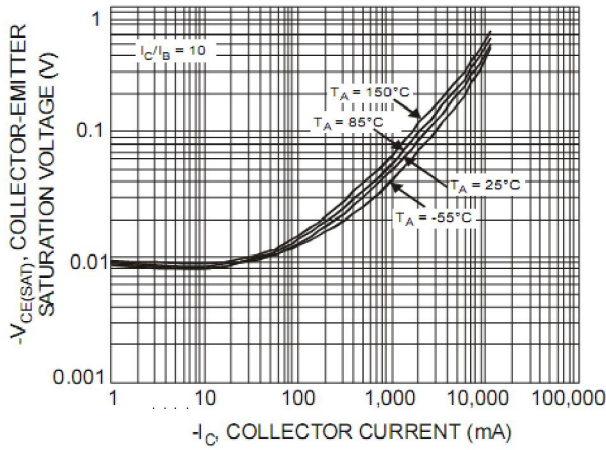


Figure 3. Saturation Voltage

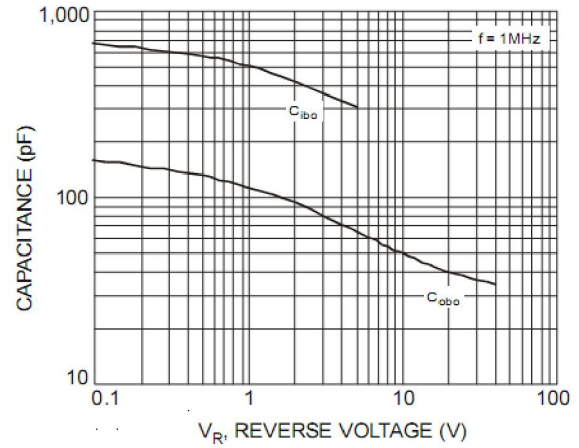


Figure 4. Capacitance Characteristic

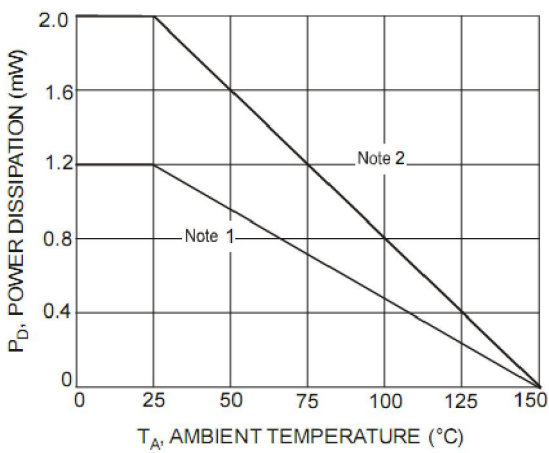


Figure 5. Power Derating

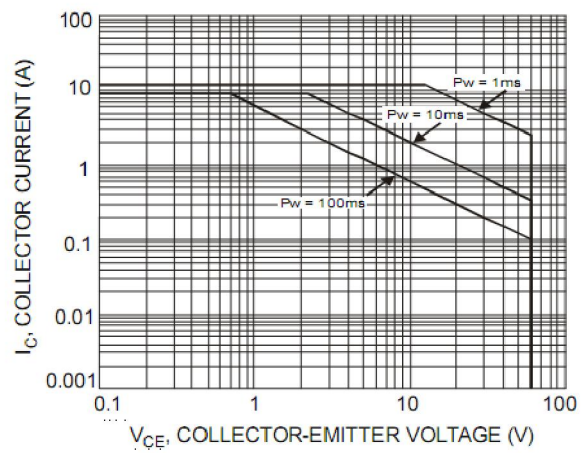


Figure 6. Safe Operating Area

Ordering information

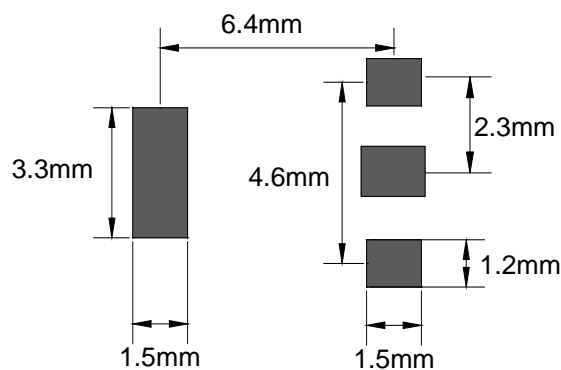
Package	Packing Description	Base Quantity	Packing Quantity
SOT-223	Tape/Reel, 7" reel	1000pcs/Reel	6000PCS/Box 30000PCS/Carton
	Tape/Reel, 13" reel	2500pcs/Reel	5000PCS/Box 30000PCS/Carton

Package Dimensions

SOT-223

Dim	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	1.50	1.80	0.059	0.071
A1	0.00	0.10	0.000	0.004
A2	1.50	1.70	0.059	0.067
b	0.65	0.75	0.026	0.030
c	0.20	0.30	0.008	0.012
D	6.40	6.60	0.252	0.260
D1	2.90	3.10	0.114	0.122
E	3.30	3.70	0.130	0.146
E1	6.85	7.15	0.270	0.281
e	2.20	2.40	0.087	0.094
e1	4.40	4.80	0.173	0.189
L	1.65	1.85	0.065	0.073
L1	0.90	1.15	0.035	0.045

The recommended mounting pad size



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