

2SB1215/2SD1815

Continued from preceding page.

Parameter	Symbol	Conditions	Ratings	Unit
Collector Dissipation	P _C		1	W
		T _c =25°C	20	W
Junction Temperature	T _j		150	°C
Storage Temperature	T _{stg}		-55 to +150	°C

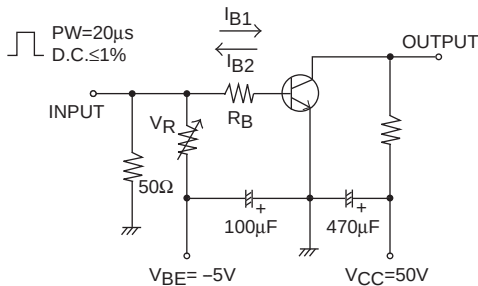
Electrical Characteristics at T_a=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I _{CBO}	V _{CB} =(-)100V, I _E =0A			(-)1	μA
Emitter Cutoff Current	I _{EBO}	V _{EB} =(-)4V, I _C =0A			(-)1	μA
DC Current Gain	h _{FE1}	V _{CE} =(-)5V, I _C =(-)0.5A	140*		400*	
	h _{FE2}	V _{CE} =(-)5V, I _C =(-)2A	40			
Gain-Bandwidth Product	f _T	V _{CE} =(-)10V, I _C =(-)0.5A		(130)180		MHz
Output Capacitance	C _{ob}	V _{CB} =(-)10V, f=1MHz		(40)25		pF
Collector to Emitter Saturation Voltage	V _{CE(sat)}	I _C =(-)1.5A, I _B =(-)0.15A		(-200)150	(-500)400	mV
Base to Emitter Saturation Voltage	V _{BE(sat)}	I _C =(-)1.5A, I _B =(-)0.15A		(-)0.9	(-)1.2	V
Collector to Base Breakdown Voltage	V _{(BR)CBO}	I _C =(-)10μA, I _E =0A	(-)120			V
Collector to Emitter Breakdown Voltage	V _{(BR)CEO}	I _C =(-)1mA, R _{BE} =∞	(-)100			V
Emitter to Base Breakdown Voltage	V _{(BR)EBO}	I _E =(-)10μA, I _C =0A	(-)6			V
Turn-On Time	t _{on}	See specified Test Circuit.		100		ns
Storage Time	t _{stg}			(800)900		ns
Fall Time	t _f			50		ns

* : The 2SB1215/2SD1815 are classified by 0.5A h_{FE} as follows :

Rank	S	T
h _{FE}	140 to 280	200 to 400

Switching Time Test Circuit



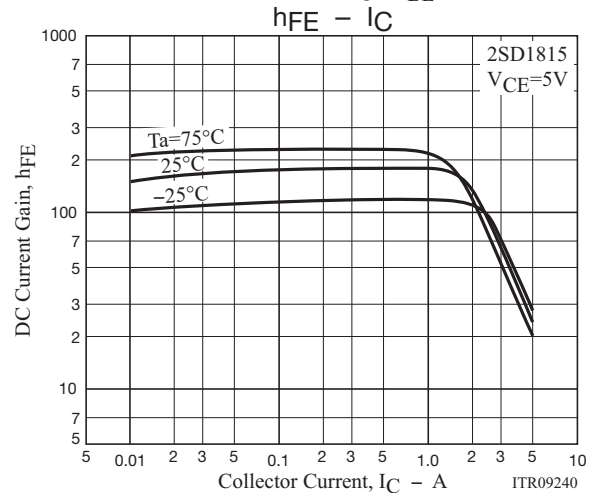
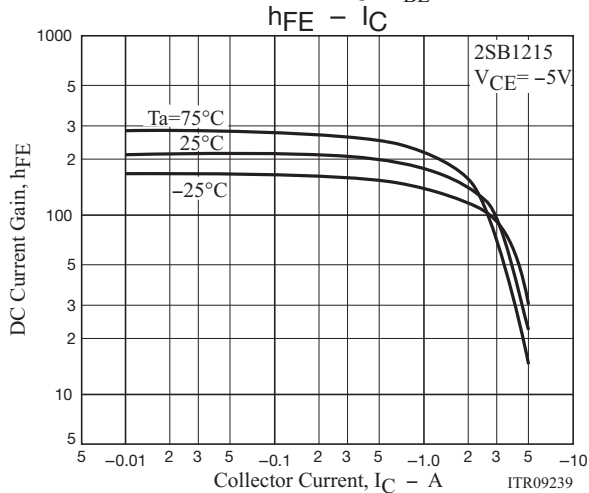
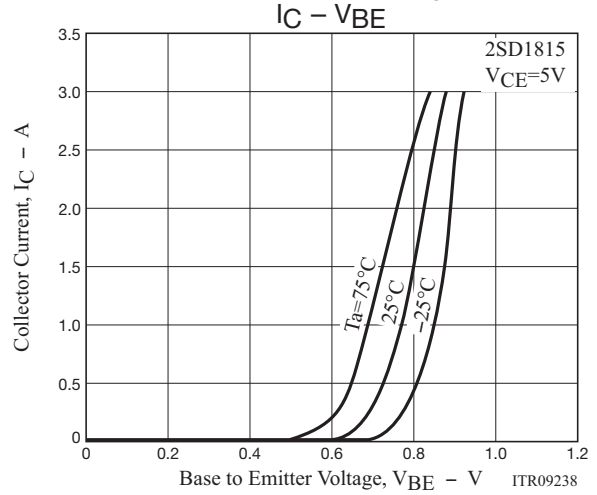
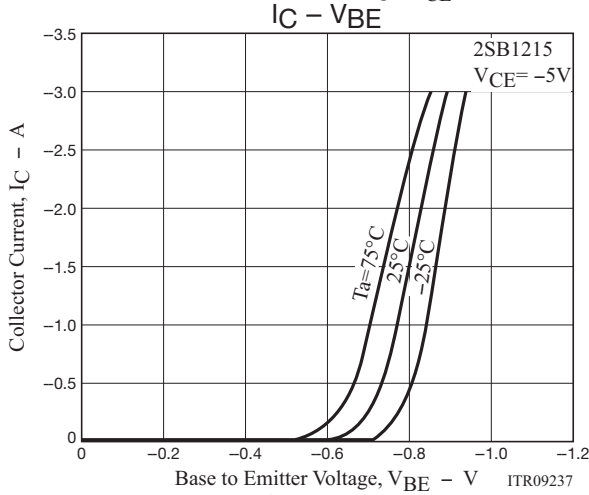
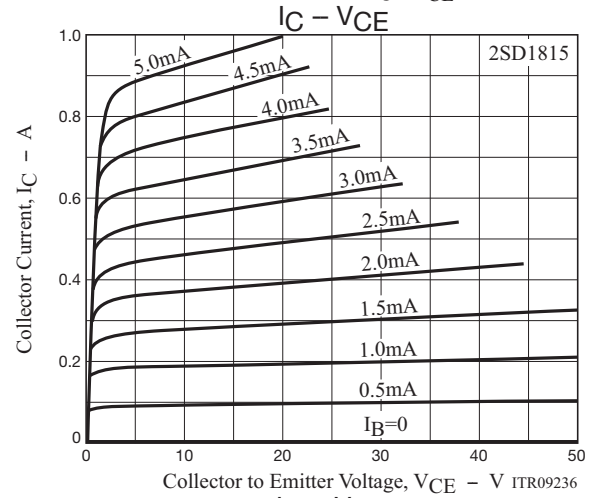
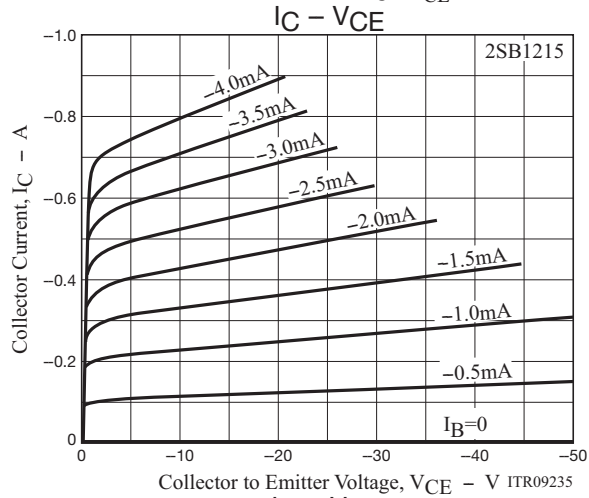
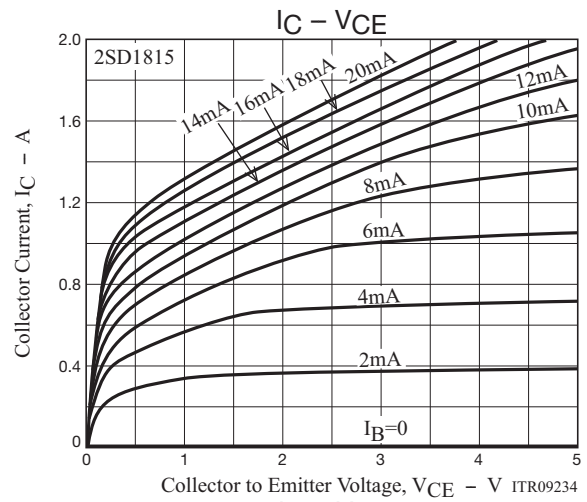
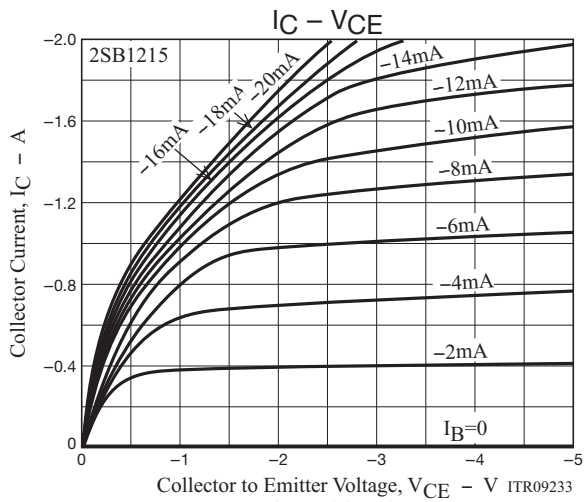
$$I_C = 10I_{B1} = -10I_{B2} = 1.5A$$

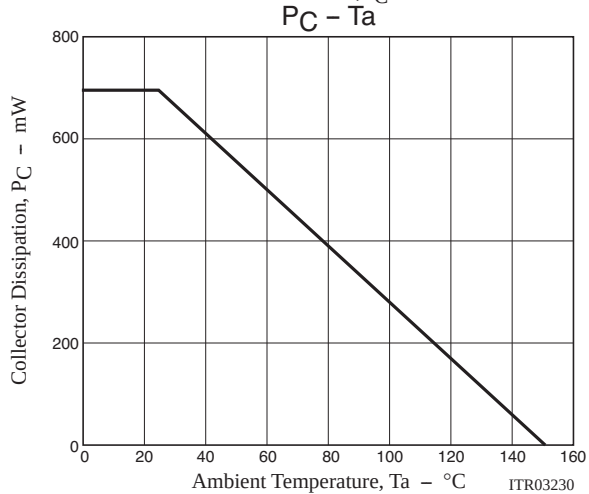
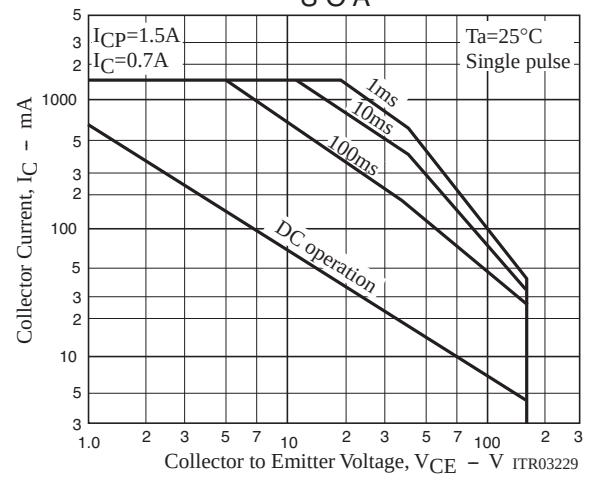
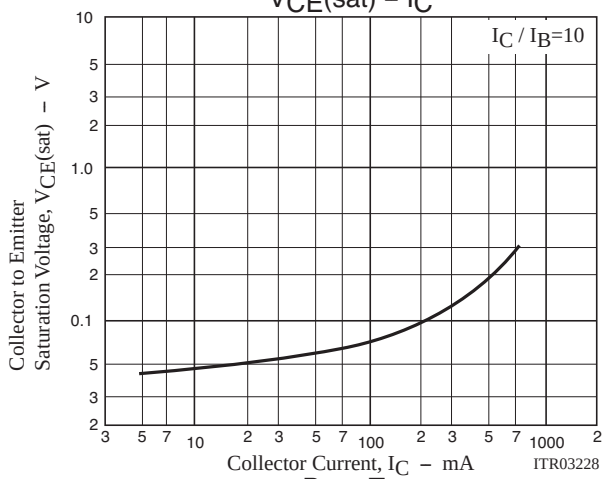
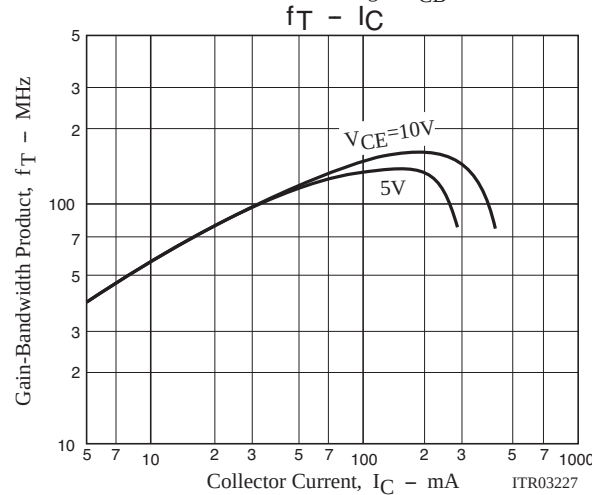
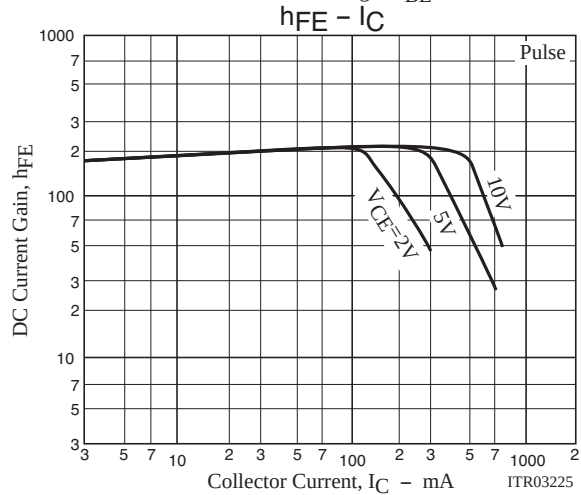
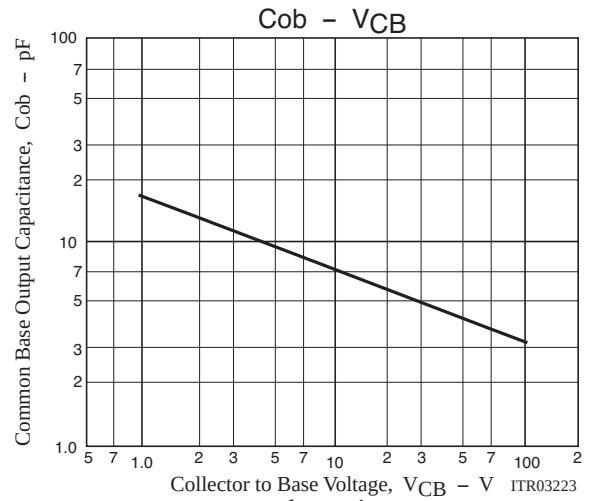
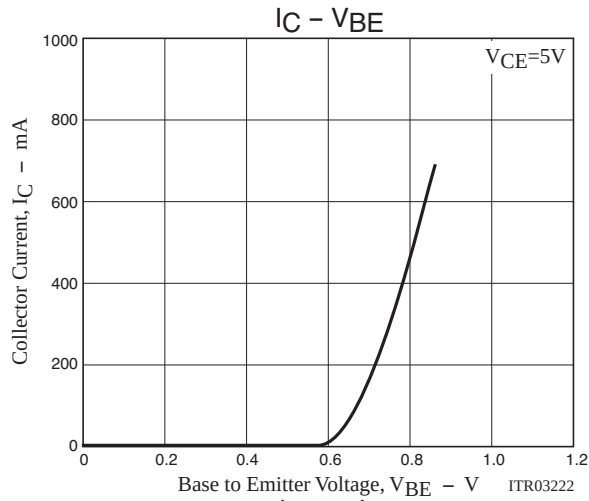
For PNP, the polarity is reversed.

Ordering Information

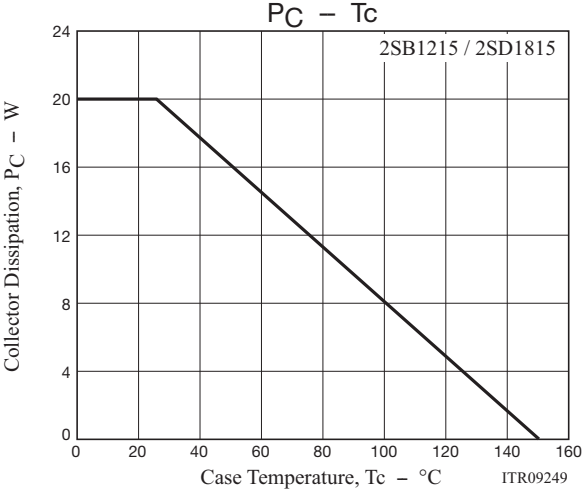
Device	Package	Shipping	memo
2SB1215S-E	TP	500pcs./bag	Pb Free
2SB1215S-H	TP	500pcs./bag	Pb Free and Halogen Free
2SB1215T-E	TP	500pcs./bag	Pb Free
2SB1215T-H	TP	500pcs./bag	Pb Free and Halogen Free
2SD1815S-E	TP	500pcs./bag	Pb Free
2SD1815S-H	TP	500pcs./bag	Pb Free and Halogen Free
2SD1815T-E	TP	500pcs./bag	Pb Free
2SD1815T-H	TP	500pcs./bag	Pb Free and Halogen Free
2SB1215S-TL-E	TP-FA	700pcs./reel	Pb Free
2SB1215S-TL-H	TP-FA	700pcs./reel	Pb Free and Halogen Free
2SB1215T-TL-E	TP-FA	700pcs./reel	Pb Free
2SB1215T-TL-H	TP-FA	700pcs./reel	Pb Free and Halogen Free
2SD1815S-TL-E	TP-FA	700pcs./reel	Pb Free
2SD1815S-TL-H	TP-FA	700pcs./reel	Pb Free and Halogen Free
2SD1815T-TL-E	TP-FA	700pcs./reel	Pb Free
2SD1815T-TL-H	TP-FA	700pcs./reel	Pb Free and Halogen Free

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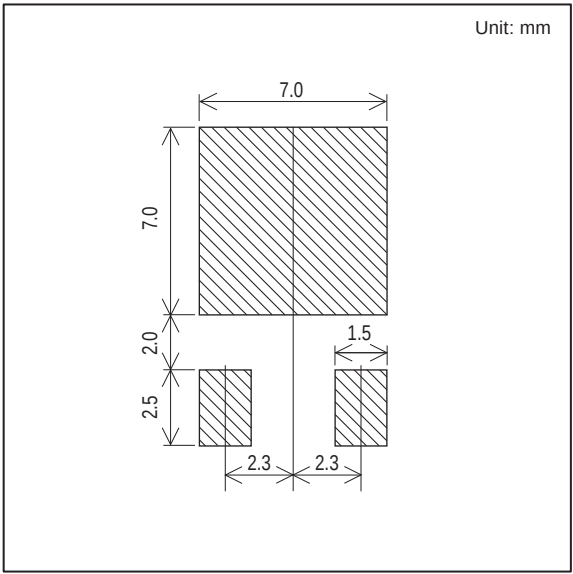
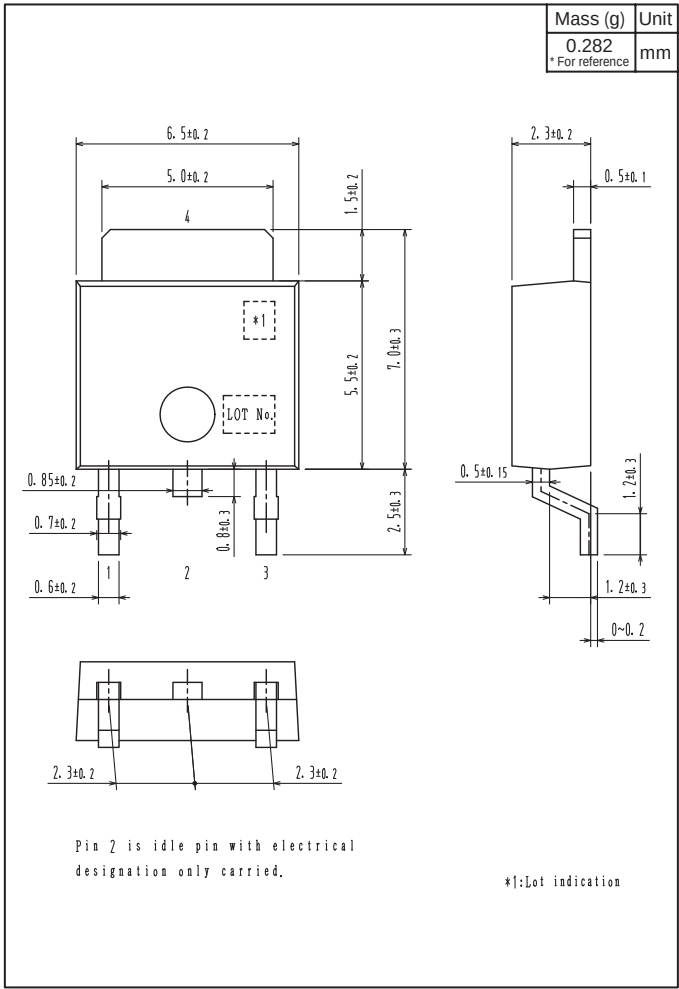


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Outline Drawing

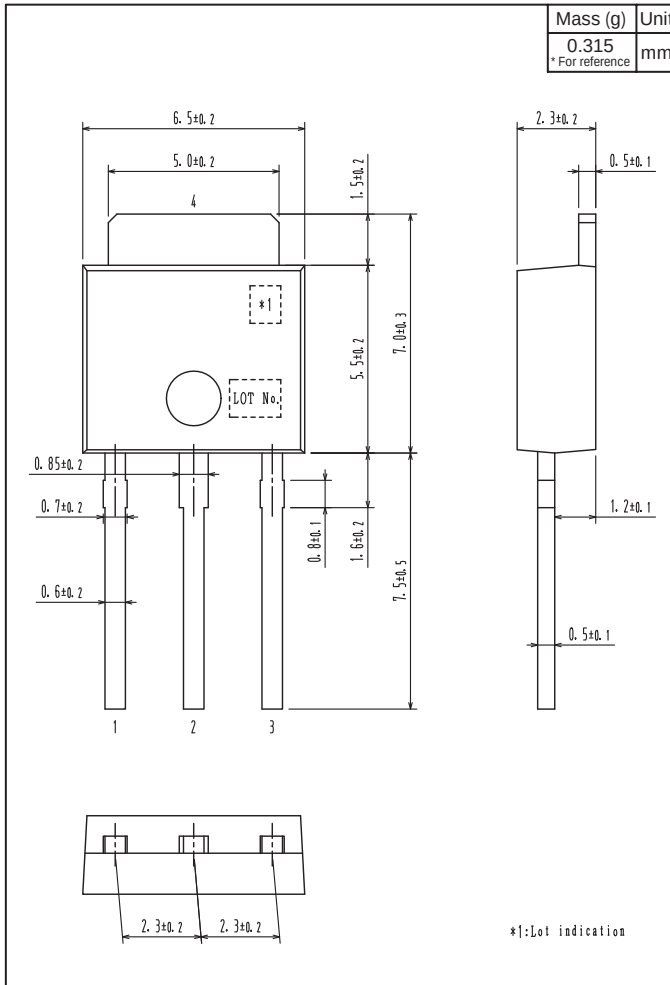
2SB1215S-TL-E, 2SB1215S-TL-H, 2SB1215T-TL-E2SB1215T-TL-H, 2SD1815S-TL-E, 2SD1815S-TL-H, 2SD1815T-TL-E, 2SD1815T-TL-H

Land Pattern Example



Outline Drawing

2SB1215S-E, 2SB1215S-H, 2SB1215T-E 2SB1215T-H, 2SD1815S-E, 2SD1815S-H, 2SD1815T-E, 2SD1815T-H



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