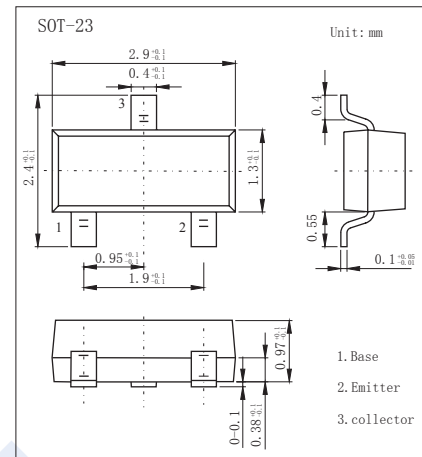


NPN Transistors

2SC2715

■ Features

- Collector Current Capability $I_c=50\text{mA}$
- Collector Emitter Voltage $V_{CE0}=30\text{V}$

■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CBO}	35	V
Collector - Emitter Voltage	V_{CEO}	30	
Emitter - Base Voltage	V_{EBO}	4	
Collector Current - Continuous	I_c	50	mA
Base Current	I_B	10	
Collector Power Dissipation	P_c	150	mW
Junction Temperature	T_J	125	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55 to 125	

■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CBO}	$I_c = 100 \mu\text{A}, I_E = 0$	35			V
Collector- emitter breakdown voltage	V_{CEO}	$I_c = 1\text{mA}, I_B = 0$	30			
Emitter - base breakdown voltage	V_{EBO}	$I_E = 100 \mu\text{A}, I_c = 0$	4			
Collector-base cut-off current	I_{CBO}	$V_{CB} = 35\text{V}, I_E = 0$			0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 4\text{V}, I_c = 0$			0.1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_c = 10\text{mA}, I_B = 1\text{mA}$			0.4	V
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_c = 10\text{mA}, I_B = 1\text{mA}$			1.2	
Base - emitter voltage	V_{BE}	$V_{CE} = 10\text{V}, I_c = 1\text{mA}$			1	
DC current gain	h_{FE}	$V_{CE} = 12\text{V}, I_c = 2\text{mA}$	40		240	
Collector-base time constant	$C_{c,rb'}$	$V_{CE} = 10\text{V}, I_E = -1\text{mA}, f = 30\text{MHz}$			50	ps
Power gain	PG	$V_{CC} = 6\text{V}, I_E = -1\text{mA}, f = 10.7\text{MHz}$	27		33	dB
Collector output capacitance	C_{ob}	$V_{CB} = 10\text{V}, I_E = 0, f = 1\text{MHz}$			3.2	pF
Transition frequency	f_T	$V_{CE} = 10\text{V}, I_c = 1\text{mA}$	100		400	MHz

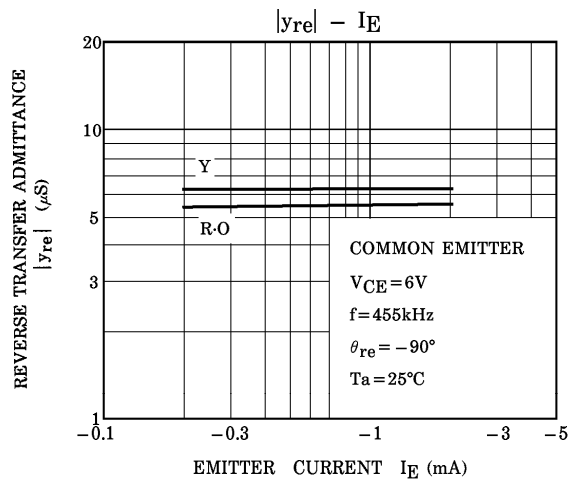
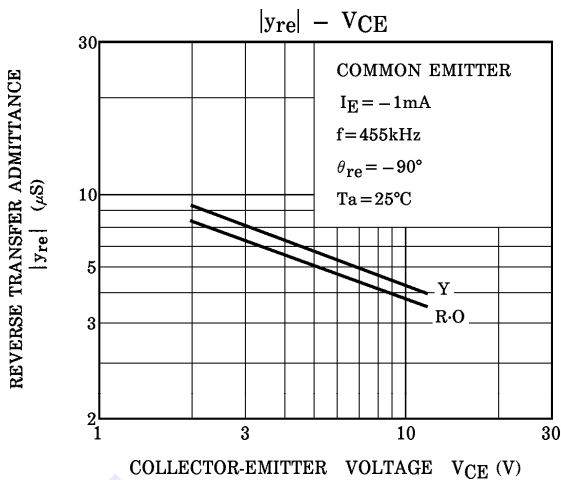
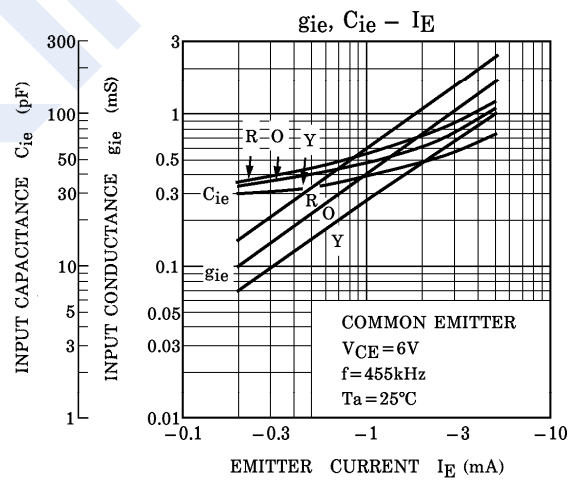
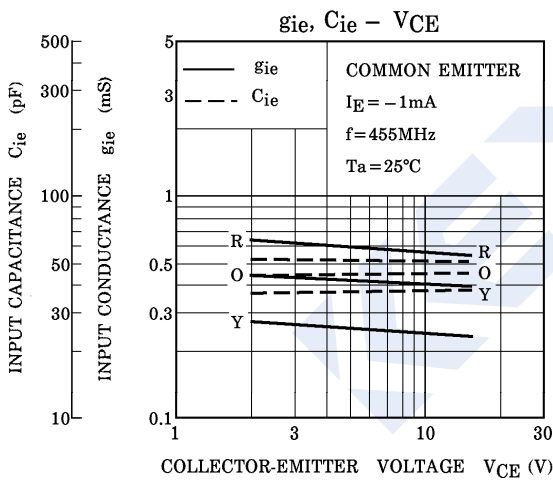
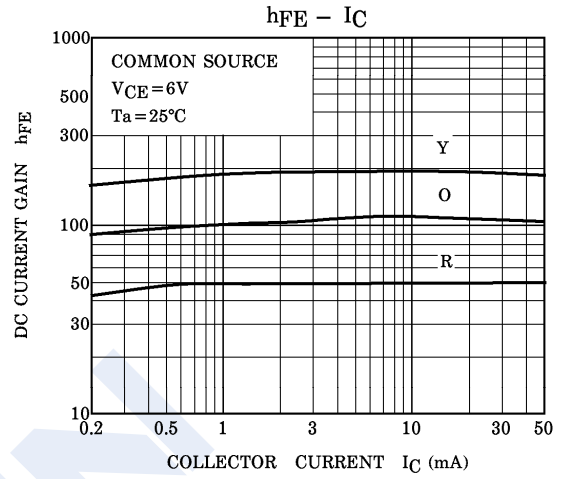
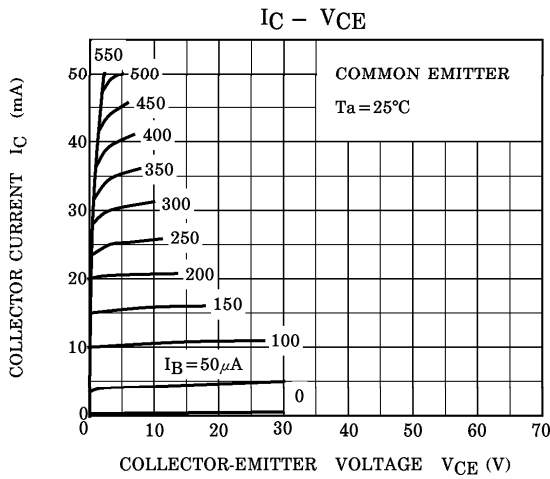
■ Classification of h_{FE}

Type	2SC2715-R	2SC2715-O	2SC2715-Y
Range	40-80	70-140	120-240
Marking	RR	RO	RY

NPN Transistors

2SC2715

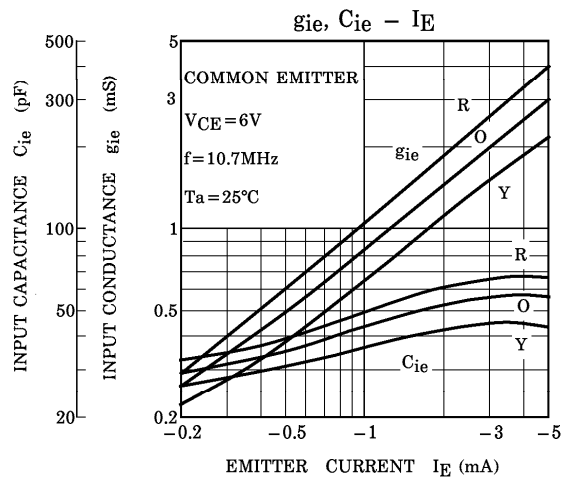
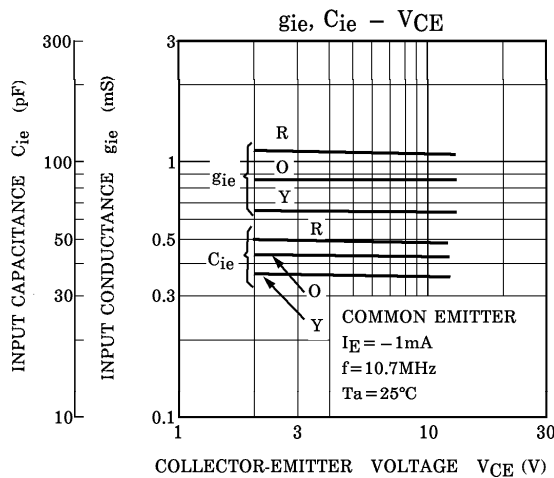
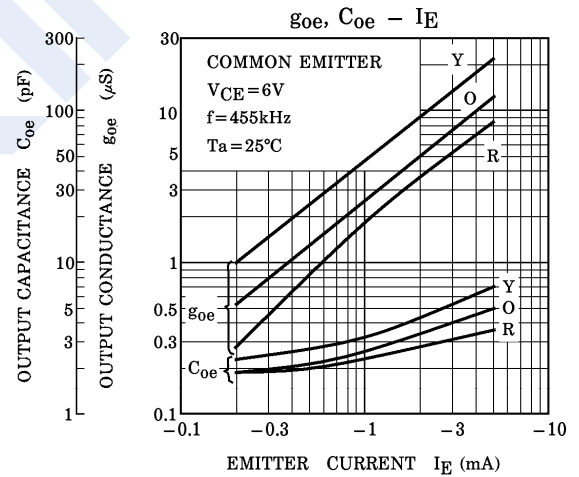
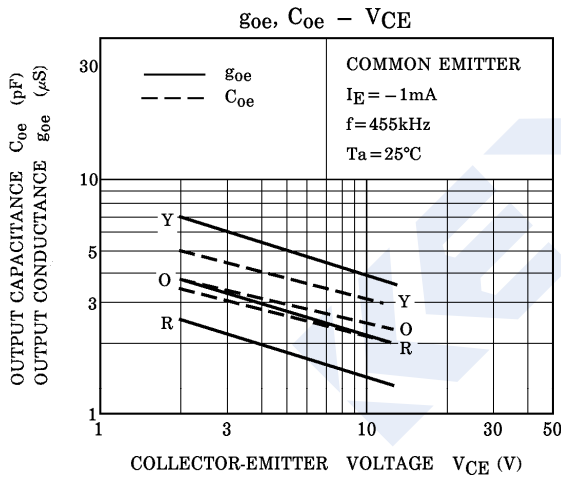
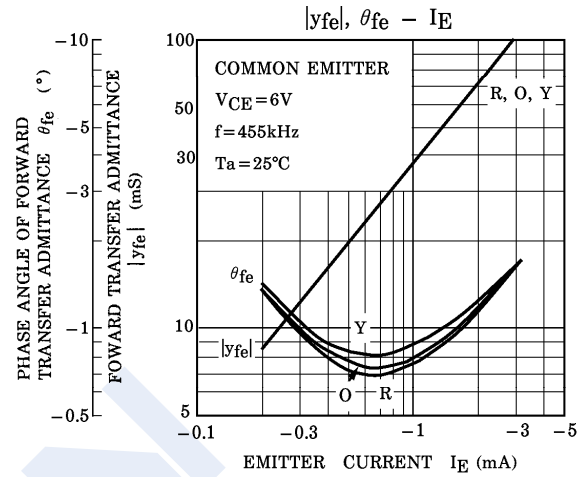
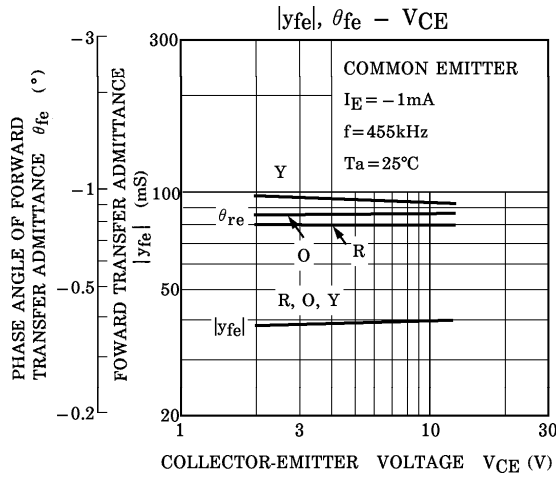
Typical Characteristics



NPN Transistors

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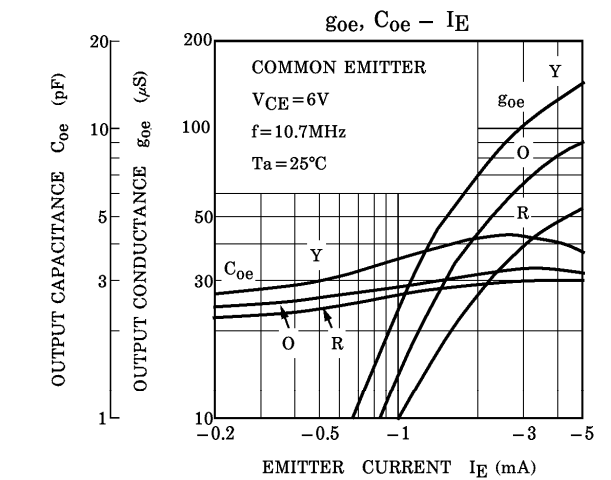
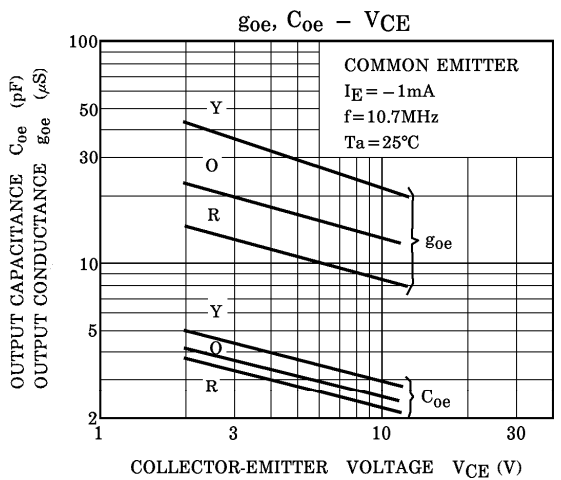
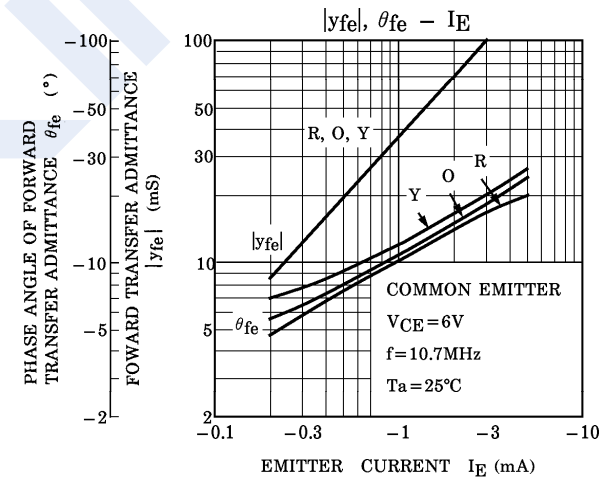
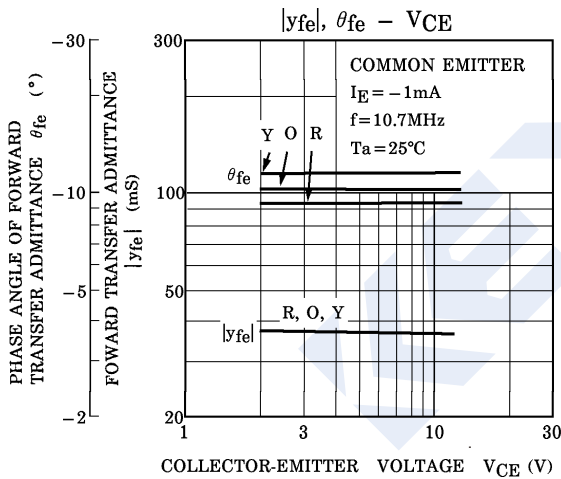
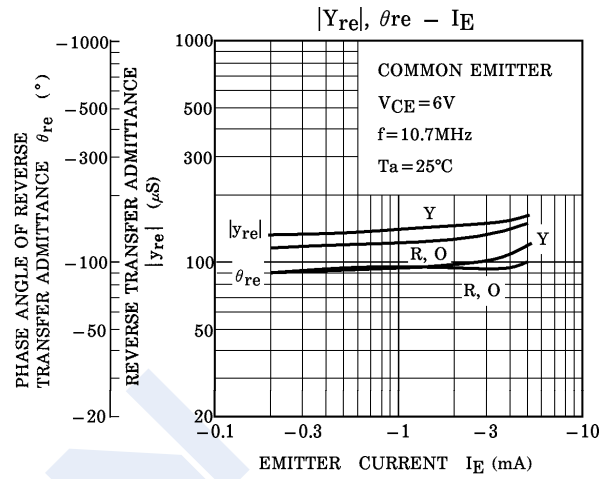
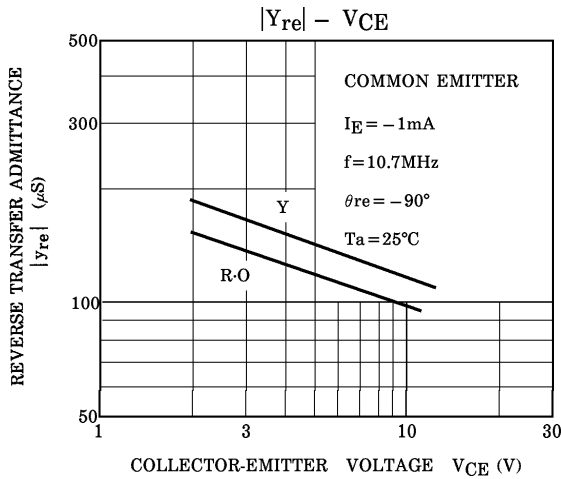
Typical Characteristics



NPN Transistors

2SC2715

■ Typical Characteristics



NPN Transistors

2SC2715

■ Typical Characteristics

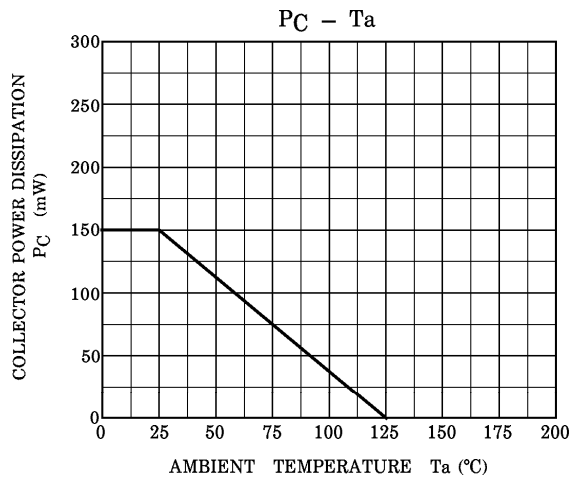
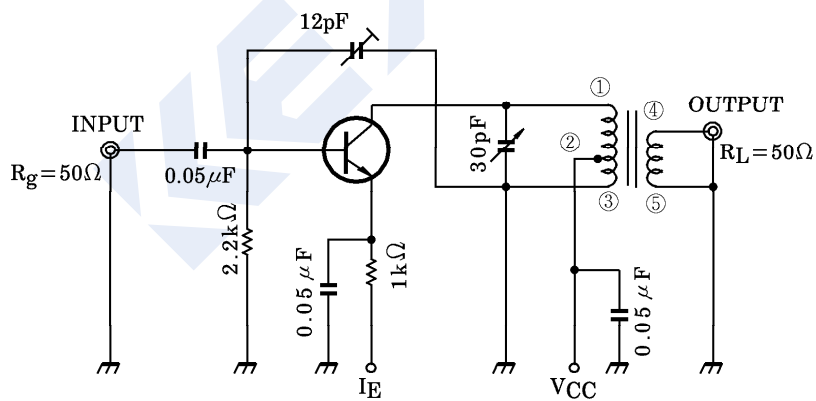


Fig. NF, Gpe TEST CIRCUIT



T : ① - ② 0.1mm ϕ UEW 20T
 ② - ③ 0.1mm ϕ UEW 8T
 ④ - ⑤ 0.1mm ϕ UEW 2T