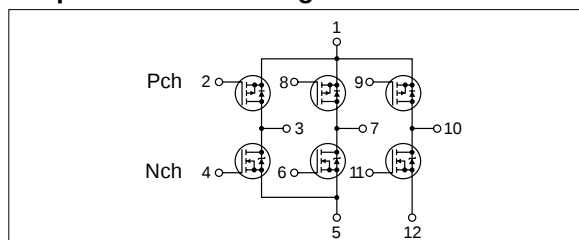


Absolute maximum ratings

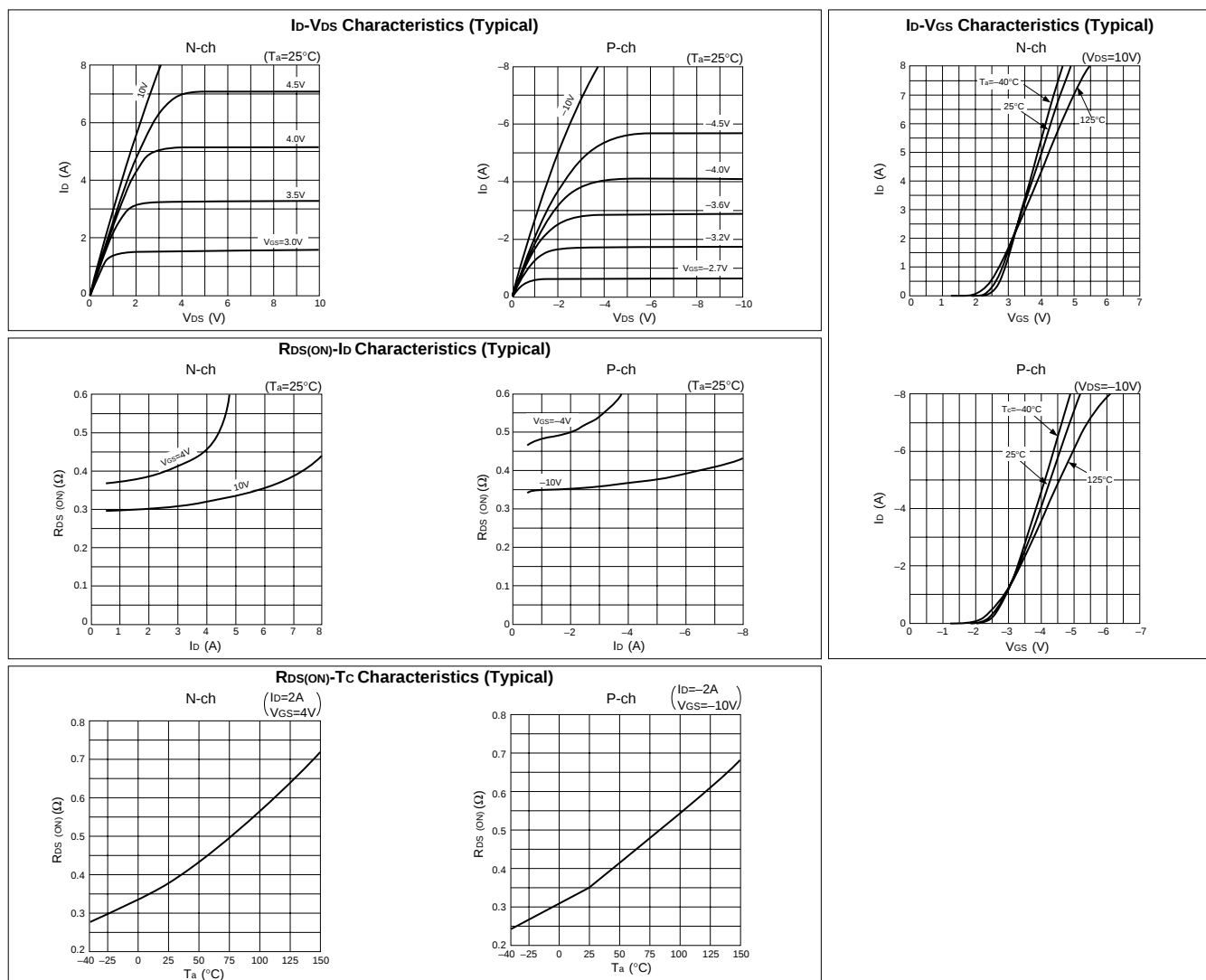
(Ta=25°C)

Symbol	Ratings		Unit
	N channel	P channel	
V _{DS}	60	-60	V
V _{GS}	±20	±20	V
I _D	4	-4	A
I _{D(pulse)}	8 (PW≤1ms, Duty≤1%)	-8 (PW≤1ms, Duty≤1%)	A
P _T	4 (Ta=25°C, with all circuits operating, without heatsink)		W
	28 (Tc=25°C, with all circuits operating, with infinite heatsink)		W
θ _{j-a}	31.25 (Junction-Air, Ta=25°C, with all circuits operating)		°C/W
θ _{j-c}	4.46 (Junction-Case, Tc=25°C, with all circuits operating)		°C/W
T _{ch}	150		°C
T _{stg}	-40 to +150		°C

Equivalent circuit diagram



Characteristic curves

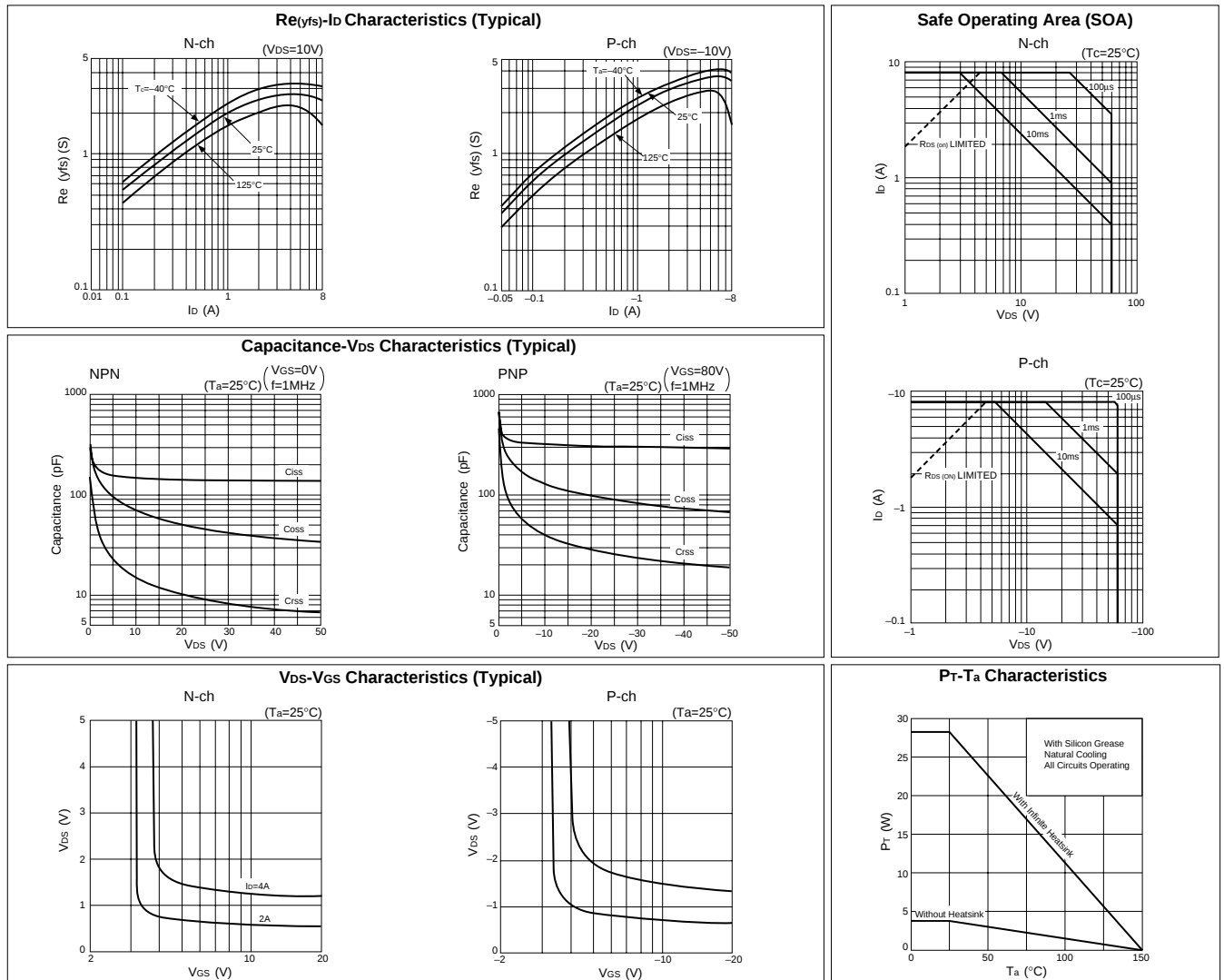


Electrical characteristics

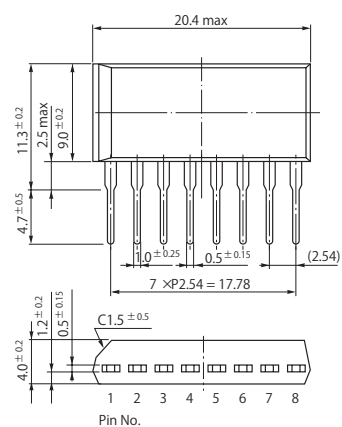
(Ta=25°C)

Symbol	N channel					P channel				
	Specification			Unit	Conditions	Specification			Unit	Conditions
	min	typ	max			min	typ	max		
$V_{(BR)DSS}$	60			V	$I_D=100\mu A, V_{GS}=0V$	-60			V	$I_D=-100\mu A, V_{GS}=0V$
I_{GSS}			± 10	μA	$V_{GS}=\pm 20V$			∓ 10	μA	$V_{GS}=\mp 20V$
I_{DSS}			100	μA	$V_{DS}=60V, V_{GS}=0V$			-100	μA	$V_{DS}=-60V, V_{GS}=0V$
V_{TH}	1.0		2.0	V	$V_{DS}=10V, I_D=250\mu A$	-1.0		-2.0	V	$V_{DS}=-10V, I_D=-250\mu A$
$R_{e(yfs)}$		2.5		S	$V_{DS}=10V, I_D=2A$		3		S	$V_{DS}=-10V, I_D=-2A$
$R_{DS(ON)}$			0.55	Ω	$V_{GS}=4V, I_D=2A$			0.55	Ω	$V_{GS}=-10V, I_D=-2A$
C_{iss}		150		pF	$V_{DS}=10V$ $f=1.0MHz$ $V_{GS}=0V$ $I_D=2A, V_{DD}=\pm 20V,$ $R_L=10\Omega, V_{GS}=5V,$ see Fig.3 on page 16.		320		pF	$V_{DS}=-10V,$ $f=1.0MHz,$ $V_{GS}=0V$ $I_D=-2A, V_{DD}=\pm 20V,$ $R_L=10\Omega, V_{GS}=-5V,$ see Fig.4 on page 16.
C_{oss}		70		pF			130		pF	
C_{rss}		15		pF			40		pF	
$t_{d(on)}$		12		ns			20		ns	
t_r		40		ns			95		ns	
$t_{d(off)}$		40		ns			70		ns	
t_f		25		ns			60		ns	
V_{SD}		1.2		V	$I_{SD}=4A, V_{GS}=0V$		-1.1		V	$I_{SD}=-4A, V_{GS}=0V$
t_{rr}		75		ns	$I_{SD}=2A, V_{GS}=0V,$ $di/dt=100A/\mu s$		75		ns	$I_{SD}=-2A, V_{GS}=0V,$ $di/dt=100A/\mu s$

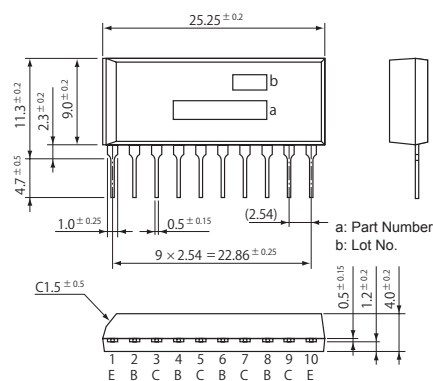
Characteristic curves



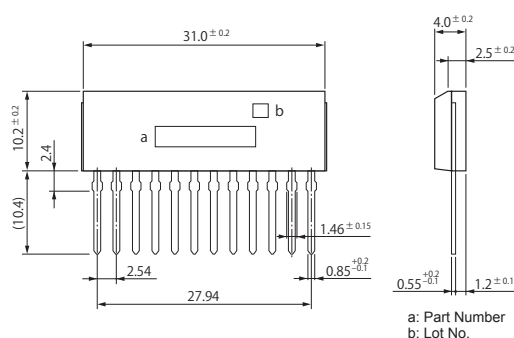
• SIP 8 (STA8Pin)



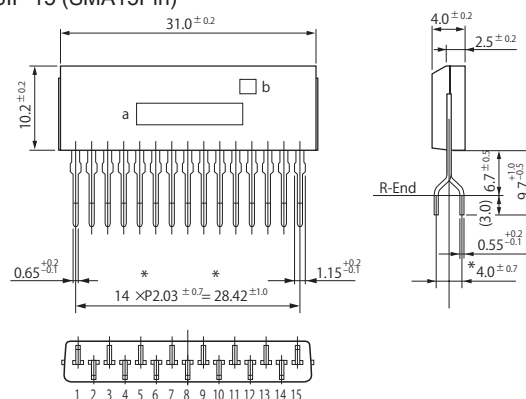
• SIP 10 (STA10Pin)



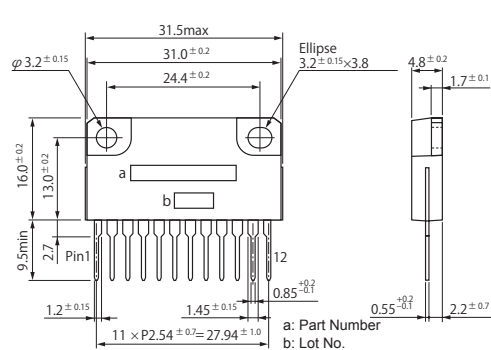
• SIP 12 (SMA12Pin)



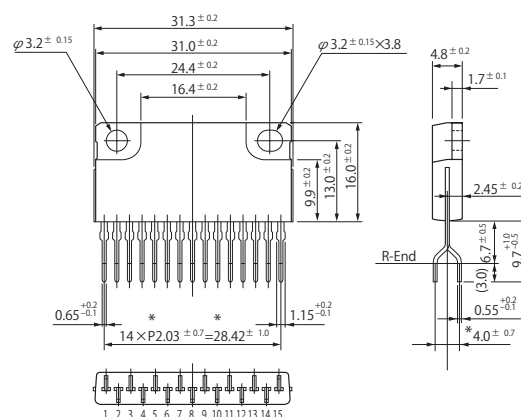
• SIP 15 (SMA15Pin)



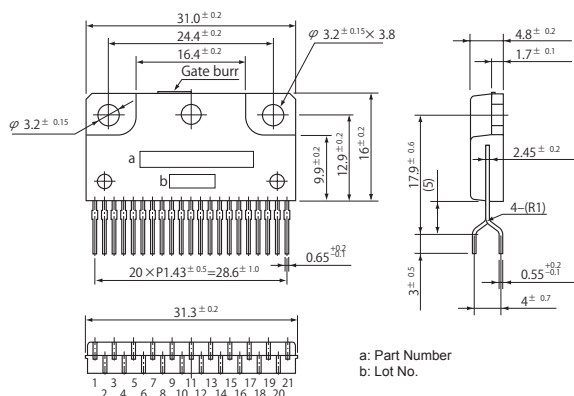
• SIP 12 with Fin (SLA12Pin)



• SIP 15 with Fin (SLA15Pin)



• SIP 21 with Fin (SLA21Pin)



(Unit:mm)