

Source supplied

USB-C PD rev 3.1 PDOs + RDOs

Sink supplied

Bit(s)	Description
B31...30	Fixed supply
B29	Dual-Role Power
B28	USB Suspend Supported
B27	Unconstrained Power
B26	USB Communications Capable
B25	Dual-Role Data
B24	Unchunked Extended Messages Supported
B23	EPR Mode Capable
B22	Reserved – <i>Shall</i> be set to zero.
B21...20	Peak Current
B19...10	Voltage in 50mV units
B9...0	Maximum Current in 10mA units

B31..30:

00b: Fixed; 01b: Battery; 02b: Variable

Table 6-11 Variable Supply (non-Battery)

Bit(s)	Description
B31...30	Variable Supply (non-Battery)
B29...20	Maximum Voltage in 50mV units
B19...10	Minimum Voltage in 50mV units
B9...0	Maximum Current in 10mA units

Table 6-12 Battery Supply

Bit(s)	Description
B31...30	Battery
B29...20	Maximum Voltage in 50mV units
B19...10	Minimum Voltage in 50mV units
B9...0	Maximum Allowable Power in 250mW units

Table 6-13 SPR Programmable Power Supply

Bit(s)	Description
B31...30	11b – Augmented Power Data Object (APDO)
B29...28	00b – SPR Programmable Power Supply
B27	PPS Power Limited
B26...25	Reserved – <i>Shall</i> be set to zero
B24...17	Maximum Voltage in 100mV increments
B16	Reserved – <i>Shall</i> be set to zero
B15...8	Minimum Voltage in 100mV increments
B7	Reserved – <i>Shall</i> be set to zero
B6...0	Maximum Current in 50mA increments

Table 6-16 Fixed Supply Fast Role Swap

Bit(s)	Description										
B31...30	Fixed supply										
B29	Dual-Role Power										
B28	Higher Capability										
B27	Unconstrained Power										
B26	USB Communications Capable										
B25	Dual-Role Data										
B24...23	Fast Role Swap required USB Type-C®										
	<table> <tr> <th>Value</th><th>Description</th></tr> <tr> <td>00b</td><td>Fast Swap not supported (Sink)</td></tr> <tr> <td>01b</td><td>Default USB Power</td></tr> <tr> <td>10b</td><td>1.5A @ 5V</td></tr> <tr> <td>11b</td><td>3.0A @ 5V</td></tr> </table>	Value	Description	00b	Fast Swap not supported (Sink)	01b	Default USB Power	10b	1.5A @ 5V	11b	3.0A @ 5V
Value	Description										
00b	Fast Swap not supported (Sink)										
01b	Default USB Power										
10b	1.5A @ 5V										
11b	3.0A @ 5V										
B22...20	Reserved – <i>Shall</i> be set to zero.										
B19...10	Voltage in 50mV units										
B9...0	Operational Current in 10mA units										

Table 6-17 Variable Supply (non-Battery)

Bit(s)	Description
B31...30	Variable Supply (non-Battery)
B29...20	Maximum Voltage in 50mV units
B19...10	Minimum Voltage in 50mV units

Bit(s)	Description
B9...0	Operational Current in 10mA units

Table 6-18 Battery Supply

Bit(s)	Description
B31...30	Battery
B29...20	Maximum Voltage in 50mV units
B19...10	Minimum Voltage in 50mV units
B9...0	Operational Power in 250mW units

Table 6-19 Programmable Power Supply

Bit(s)	Description
B31...30	11b – Augmented Power Data Object (APDO)
B29...28	00b – SPR Programmable Power Supply
B27...25	Reserved – <i>Shall</i> be set to zero
B24...17	Maximum Voltage in 100mV increments
B16	Reserved – <i>Shall</i> be set to zero
B15...8	Minimum Voltage in 100mV increments
B7	Reserved – <i>Shall</i> be set to zero
B6...0	Maximum Current in 50mA increments

Table 6-14 EPR Adjustable Voltage

Bit(s)	Description
B31...30	11b – Augmented Power Data Object (APDO)
B29...28	01b – EPR Adjustable Voltage Supply
B27...26	Peak Current (see Table 6-15)
B25...17	Maximum Voltage in 100mV increments
B16	Reserved – Shall be set to zero
B15...8	Minimum Voltage in 100mV increments
B7...0	PDP in 1W increments

Table 6-20 EPR Adjustable Voltage Supply

Bit(s)	Description
B31...30	11b – Augmented Power Data Object (APDO)
B29...28	01b – EPR Adjustable Voltage Supply
B27...26	Reserved – Shall be set to zero
B25...17	Maximum Voltage in 100mV increments
B16	Reserved – Shall be set to zero
B15...8	Minimum Voltage in 100mV increments
B7...0	PDP in 1W increments

RDOs

Table 6-21 Fixed and Variable Request Data Object

Bits	Description
B31...28	Object position (0000b and 1110b...1111b are Reserved and Shall Not be used)
B27	GiveBack flag = 0
B26	Capability Mismatch
B25	USB Communications Capable
B24	No USB Suspend
B23	Unchunked Extended Messages Supported
B22	EPR Mode Capable

Bits	Description
B21...20	Reserved - Shall be set to zero.
B19...10	Operating current in 10mA units
B9...0	Maximum Operating Current 10mA units

Table 6-22 Fixed and Variable Request Data Object with GiveBack Support

Bits	Description
B31...28	Object position (0000b and 1110b...1111b are Reserved and Shall Not be used)
B27	GiveBack flag =1
B26	Capability Mismatch
B25	USB Communications Capable
B24	No USB Suspend
B23	Unchunked Extended Messages Supported
B22	EPR Mode Capable
B21...20	Reserved - Shall be set to zero.
B19...10	Operating Current in 10mA units
B9...0	Minimum Operating Current 10mA units

Table 6-23 Battery Request Data Object

Bits	Description
B31...28	Object position (0000b and 1110b...1111b are <i>Reserved</i> and <i>Shall Not</i> be used)
B27	GiveBackFlag = 0
B26	Capability Mismatch
B25	USB Communications Capable
B24	No USB Suspend
B23	Unchunked Extended Messages Supported
B22	EPR Mode Capable
B21...20	<i>Reserved - Shall</i> be set to zero.
B19...10	Operating Power in 250mW units
B9...0	Maximum Operating Power in 250mW units

Table 6-24 Battery Request Data Object with GiveBack Support

Bits	Description
B31...28	Object position (0000b and 1110b...1111b are <i>Reserved</i> and <i>Shall Not</i> be used)
B27	GiveBackFlag = 1
B26	Capability Mismatch
B25	USB Communications Capable
B24	No USB Suspend
B23	Unchunked Extended Messages Supported
B22	EPR Mode Capable
B21...20	<i>Reserved - Shall</i> be set to zero.
B19...10	Operating Power in 250mW units
B9...0	Minimum Operating Power in 250mW units

Table 6-25 PPS Request Data Object

Bits	Description
B31...28	Object position (0000b and 1110b...1111b are <i>Reserved</i> and <i>Shall Not</i> be used)
B27	<i>Reserved - Shall</i> be set to zero
B26	Capability Mismatch
B25	USB Communications Capable
B24	No USB Suspend
B23	Unchunked Extended Messages Supported
B22	EPR Mode Capable
B21	<i>Reserved - Shall</i> be set to zero.
B20...9	Output Voltage in 20mV units.
B8...7	<i>Reserved - Shall</i> be set to zero.
B6...0	Operating Current 50mA units

Table 6-26 AVS Request Data Object

Bits	Description
B31...28	Object position (0000b and 1110b...1111b are <i>Reserved</i> and <i>Shall Not</i> be used)
B27	<i>Reserved</i> – <i>Shall</i> be set to zero
B26	Capability Mismatch
B25	USB Communications Capable
B24	No USB Suspend
B23	Unchunked Extended Messages Supported
B22	EPR Mode Capable
B21	<i>Reserved</i> - <i>Shall</i> be set to zero.
B20...9	Output Voltage in 25mV units, the least two significant bits <i>Shall</i> be set to zero making the effective voltage step size 100mV.
B8...7	<i>Reserved</i> - <i>Shall</i> be set to zero.
B6...0	Operating Current 50mA units

The end.